

# BUSINESS WEEK

INDEX ON PAGE 22

## Brands

HOW PEOPLE  
CHOOSE THEM  
PAGE 50

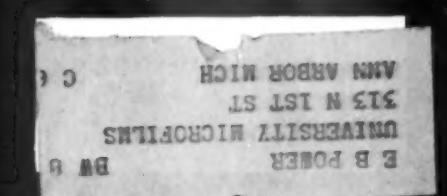
←  
INDEX  
YEAR  
AGO



Detroit shows the people what it has (page 29)

A McGRAW-HILL PUBLICATION

JAN. 30, 1954





## Keeping operating costs down . . . to keep freight moving!

Whether they operate fast-moving diesel trains, versatile lift trucks or speedy highway haulers, the men who move freight have one thought in common—get it there on time at the lowest possible cost! And wherever freight moves, you'll find it rolls more efficiently—more economically—on Bower Spher-O-Honed Bearings. ★ America's leading truck and trailer manufacturers, for example, have long depended on Bower Spher-O-Honed Bearings. They know that Bower's high standards of quality and engineering superiority plus exclusive design improvements—like those shown at right—mean longer life and quiet, dependable operation. In fact, Bower Spher-O-Honed design has reduced bearing failure to a rarity! ★ Specify bearings for your product from Bower's complete line of tapered, straight and journal roller bearings for every field of transportation and industry.

BOWER ROLLER BEARING COMPANY • DETROIT 14, MICHIGAN



# BOWER



### ADVANCED SPHER-O-HONED DESIGN INCREASES LIFE

Spherically generated roll heads • Higher flange with larger two-zone contact • Large oil groove • Honed races • Highest quality materials • Precision workmanship

ROLLER BEARINGS



*"Vision is Indispensable to Progress"*

## How an aluminum kettle mirrored the shape of things to come

Today they sheath skyscrapers with aluminum. It's an important metal in airplanes, ships, trains, trucks and busses. Slender aluminum cables share the job of carrying America's light and power.

These are only two of the more than 4,000 uses of this "Twentieth Century Metal"—all stemming directly from the gleaming tea-kettle which in 1891 was the first product of an aluminum foundry.

From that tea-kettle to modern industrial uses was an inevitable step. With new fabricating techniques, lower prices, and a ready supply of

raw material in the bauxite ore which makes up eight percent of the earth's surface, aluminum earned quick acceptance.

Light but strong, corrosion resistant, a good conductor, easily workable, it has become a key material in the transportation, building, electrical, packaging, hardware, and appliance industries. From stoves to

steam shovels, camera films to beer barrels, a metal for today—and tomorrow. In 1954—a U.S. capacity of 1,500,000 tons; twenty years from now—4,500,000 tons.

Aluminum—an example of the progress attained by men of vision working together and another great contributor to America's steady development.

### BANKERS TRUST COMPANY

16 WALL STREET, NEW YORK 15, N. Y.

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION





**THAT'S A TRANSISTOR, invented at Bell Telephone Laboratories.** This tiny electronic device can do many things that vacuum tubes can do and more besides. Though little larger than a coffee bean, it can amplify electric signals 100,000 times.

## **She's Holding a Five-year-old Granddaddy**

The *Transistor* was announced only five years ago but it is already the daddy and granddaddy of many promising offspring. All of the growing uses of this tiny electronic device stem from its invention at Bell Telephone Laboratories.

Seldom has there been an invention with such exciting possibilities in telephony and in other fields. A recent issue of *The Reader's Digest* calls it "The Fabulous Midget" and reprints these

words from an article in the *Science News Letter*: "In less than half a century, the electronic tube has changed the world. The effect of the transistor on our lives may be equally potent."

The Bell System, in accordance with its established policy of making all of its inventions available to others on reasonable terms, has licensed forty companies to make and sell transistors. These include makers of advanced

equipment for defense, as well as radios, television sets, computing machines, hearing aids and electronic apparatus.

One of the first uscs of the *Transistor* in telephony was in the new electronic equipment which enables telephone customers to dial Long Distance calls from coast to coast.

We can already see the time when it will bring many other improvements in both Local and Long Distance service.

**BELL TELEPHONE SYSTEM**



**LOCAL... TO SERVE THE COMMUNITY.**

**NATIONWIDE... TO SERVE THE NATION.**

# B U S I N E S S W E E K

**EDITOR & PUBLISHER** Elliott V. Bell  
**MANAGING EDITOR** Edgar A. Grunwald  
**EXECUTIVE EDITOR** Kenneth Kramer

**ASSISTANT MANAGING EDITOR** Robert B. Colborn  
**ASSOCIATE MANAGING EDITOR** John L. Cobbs  
**ASSOCIATE MANAGING EDITOR** Peter French

## DEPARTMENTS

**Business Outlook:** Clark R. Pace, *Editor*; Robert H. Persons, Jr.  
**Commodities:** Gertrude Charloff, *Editor*  
**Finance:** William McKee Gillingsham, *Editor*; Paul D. Gesner, David B. Carlson  
**Foreign:** Howard Whidden, *Editor*; Paul R. Miller, Jr., John R. Thomas  
**Industrial Production:** Charles M. Garvey, *Editor*; George J. Gray, Jr.  
**Labor:** Merlin S. Pitzele, *Editor*; Edward T. Townsend, Caroline Adams  
**Management:** Richard L. Waddell, *Editor*; Richard M. Wright  
**Marketing:** Carl Rieser, *Editor*; Cora Carter  
**Personal Business:** Guy Shipley, Jr., *Editor*  
**Regions:** Richard M. Machol, *Editor*  
**Research:** John K. Fockler, *Editor*  
**Illustration:** Harry Jensen, Kate McSweeney, *Editors*; Richard A. Wolters (*Pictures-Photography*),  
 Bernard R. Clorman, Robert Iscar, Herbert F. Kratovil, Jonny Mosley, Arthur Richter  
**Special Projects:** Frank J. Fogarty  
**Statistics:** Elsa Denoo  
**The Trend:** M. J. Rossant  
**Library:** Dorothy Roantree, *Librarian*; Emily Cherry, Ruth Callanan  
**Assistant to the Editor & Publisher:** John F. Hartshorne

## NEWS EDITORS

Marilyn T. Benjamin, T. B. Crane, Robert F. Deed, Maxwell D. Gunther, Lawrence H. Odell,  
 Doris L. White

## EDITORIAL ASSISTANTS

Edward J. Burgess, Jr., Mary M. Burgess, Marguerite G. Cronin, D. A. Drennen, Jean Drummond,  
 Barbara Kleban, Alice Marks

## ECONOMICS STAFF

Dexter M. Keezer, *Director*; William H. Chartener, Peter J. Davies, Richard Everett, Douglas  
 Greenwald, Margaret Matulis, Robert P. Ulin

## DOMESTIC NEWS SERVICE

**Boston Bureau:** Paul Finney, *Manager*  
**Chicago Bureau:** James M. Sutherland, *Manager*; Mary B. Stephenson, Dorothy Miller  
**Cleveland Bureau:** Robert E. Cochran, *Manager*; Jean H. Henderson  
**Detroit Bureau:** William Kroger, *Manager*  
**Houston Bureau:** Eugene Miller, *Manager*; Mary Schiflett  
**Los Angeles Bureau:** Thomas M. Self, *Manager*  
**Philadelphia Bureau:** W. B. Whichard, Jr., *Manager*  
**Pittsburgh Bureau:** Richard N. Larkin, *Manager*  
**San Francisco Bureau:** Richard Lamb, *Manager*; Joanne O'Brien  
**Washington Bureau:** George B. Bryant, Jr., *Manager*; Glen Bayless, Alan E. Adams, Carter Field,  
 Jay Flocken, Boyd France, Sam Justice, Craig Lewis, Donald O. Loomis, Jesse Mock, Gladys Montgomery, Arthur L. Moore, E. William Olcott, Morton A. Reichel, Caroline Robertson, John T. Skelly, Vincent Smith.  
**Correspondents:** Akron, Albany, Atlanta, Austin, Baltimore, Birmingham, Boston, Buffalo, Charleston, Charlotte, Cincinnati, Columbus, Dallas, Denver, Des Moines, Duluth, Fort Worth, Greenboro, Hartford, Jacksonville, Kansas City, Knoxville, Little Rock, Memphis, Milwaukee, Minneapolis, Nashville, New Orleans, Oklahoma City, Orono, Phoenix, Portland, (Ore.), Providence, Richmond, Rochester, Salt Lake City, San Antonio, San Diego, Seattle, St. Louis, Syracuse, Toledo, Wilmington, Worcester, Honolulu. **Correspondent Relations:** Dorothea Schmidt

## FOREIGN NEWS SERVICE

**Editor:** Joseph K. Van Denburg, Jr.  
**Frankfurt:** Gerald W. Schroder  
**London:** Nathaniel McKitterick  
**Manila:** Herbert Leopold  
**Correspondents:** Amsterdam, Athens, Bangkok, Beirut, Belgrade, Bogota, Bombay, Brussels, Buenos Aires, Cairo, Caracas, Ciudad Trujillo, Copenhagen, Djakarta, Durban, Geneva, Guatemala City, Havana, Helsinki, Istanbul, Johannesburg, Karachi, La Paz, Lima, Madrid, Melbourne, Oslo, Ottawa, Panama City, Quito, Reykjavik, Rome, Salzburg, San Juan, San Salvador, Santiago, Stockholm, Sydney, Tehran, Tel Aviv, Wellington, Winnipeg.

## ADVERTISING & BUSINESS MANAGER Herman C. Sturm



BUSINESS WEEK • JAN. 30 • NUMBER 1274

(with which are combined *The Annalist* and *the Magazine of Business*) • Published weekly by McGraw-Hill Publishing Company, Inc., 122 East 42nd Street, New York 17, N. Y. • Publication Office, 99-129 North Broadway, Albany, N. Y. • Advertising Manager and Advertising Offices, 330 West 42nd St., New York 36 • Donald C. McGraw, President; Willard Chevalier, Executive Vice-President; John A. Gerard, Vice-President and Treasurer; John J. Murphy, Vice-President and Secretary; Paul Montgomery, Senior Vice-President and Controller; Philip B. Smith, Vice-President and General Director; Bond, Vice-President and Director of Advertising. Subscriptions: Address correspondence regarding subscriptions to J. B. Blackburn, Jr., Vice-

President and Director of Circulation, *Business Week*, 99-129 N. Broadway, Albany 1, N. Y., or 330 West 42nd St., New York 36. Allow one month for change of address.

Subscriptions to *Business Week* are solicited only from management-men in business and industry. Postage paid at Albany, N. Y., and additional postage paid at Montreal, Canada.

Single copies 25¢. Subscription rates: United States and possessions \$7.00 a year; \$12.00 for three years. Canada \$7.00 a year; \$14.00 for three years. Other Western Hemisphere countries \$15 a year; \$25.00 for three years. Other countries \$25 a year; \$50.00 for three years.

Entered as second-class matter Dec. 4, 1935, at the Post Office at Albany, N. Y., under Act of Mar. 3, 1879. • Printed in U. S. A. Copyright 1954 by McGraw-Hill Publishing Co., Inc. — All rights reserved.

"That buyer  
in Buffalo was  
always 'busy'..."



... until an officer of the Marine  
Trust Company of Western New  
York smoothed the way for me!"

Service of this kind can often be given to YOUR representative if the Marine Midland Trust Company of New York is your bank.

In 9 principal trading regions of New York State, affiliated Marine Midland banks have 125 offices serving 61 New York State communities. Their officers know local people and business as only local residents can. Let us show you how their on-the-spot "next-door-neighbor" knowledge can be helpful to your business.

**The**  
**MARINE MIDLAND**  
**TRUST COMPANY**  
*of New York*

120 BROADWAY • NEW YORK  
 Member Federal Deposit Insurance Corporation

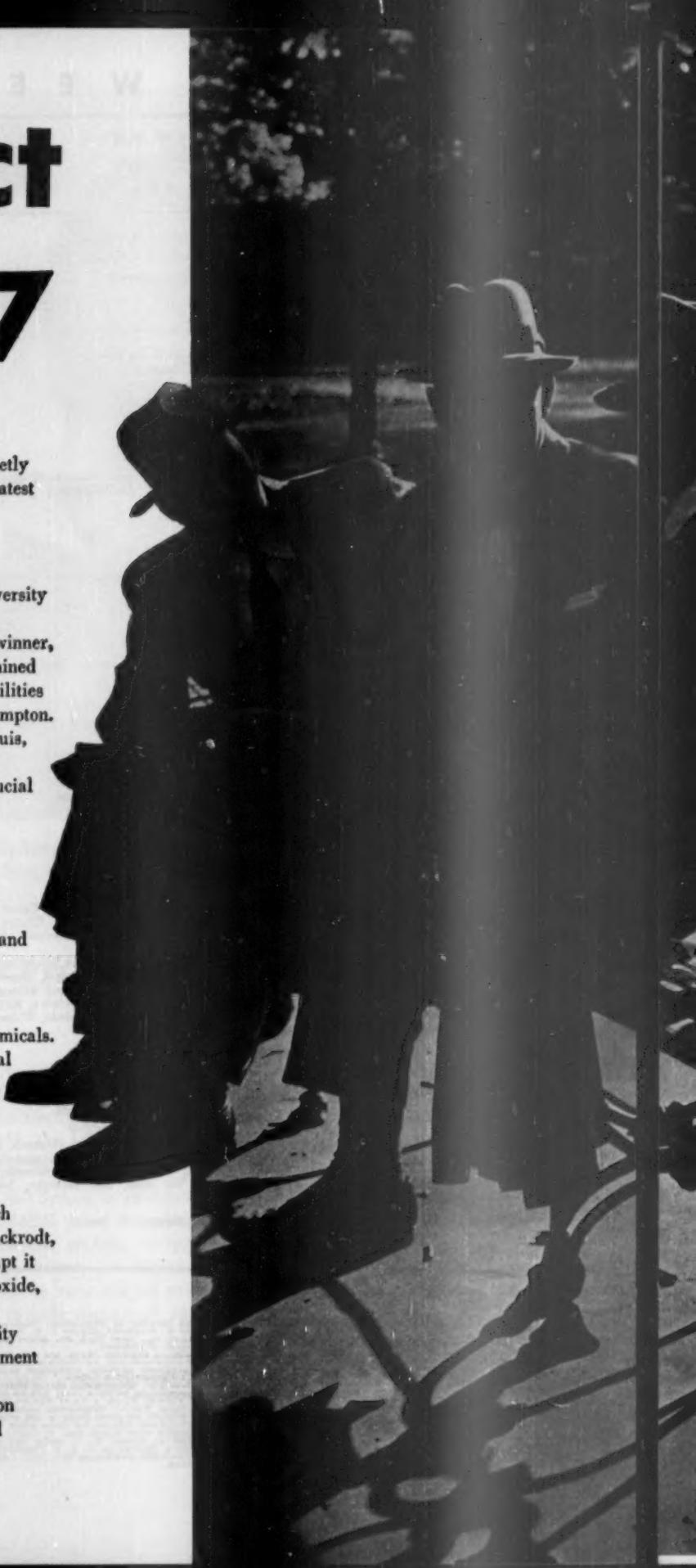
# project 42-17

April 1942. Big things were being done quietly in those days. Shrouded in secrecy the greatest brain trust in history had undertaken to release the enormous energy of the atom for the defense of the free world.

Under the trees on the campus at the University of Chicago, three men sat quietly talking. One, an eminent physicist and Nobel prize-winner, was a leader of a group of scientists determined to marshal the nation's highest technical facilities for this purpose. His name: Arthur Holly Compton. He told his companions, just in from St. Louis, that he and his colleagues faced a problem of vital importance to the war effort. The crucial requirement was for pure uranium oxide, far purer than it had ever before been prepared except in test tubes. Moreover, his people would need tons of it, first for experimentation, later for its ultimate use.

The visitors from St. Louis, Henry V. Farr and John R. Ruhoff, were chemists from the Mallinckrodt Chemical Works, a firm with a long-established reputation for more than ordinary skill in the manufacture of fine chemicals. Edward Mallinckrodt had asked his technical managers to give his friend Compton whatever he wanted, if humanly possible.

Scientists working under the sponsorship of the N.D.R.C., Compton explained, had developed an ether extraction process for the purification of uranium nitrate which worked on a laboratory scale. Could Mallinckrodt, with long experience in handling ether, adapt it for use in tonnage production of uranium oxide, and achieve the necessary high purity? The specifications were rigid. Extreme purity was required. Time was short; but the assignment did not differ greatly from many others undertaken by Mallinckrodt chemists, also on a highly confidential basis, for the chemical and pharmaceutical industries.





Back in St. Louis, these men quietly, secretly put Mallinckrodt's technical organization to work. Less than 15 weeks later the primary problems of commercial production had been solved, a new plant had been designed, built, put into operation, and Dr. Compton's scientists were getting their uranium oxide.

After it was all over, the Smyth report recorded: "Delivery started in July 1942 at a rate of 30 tons a month...it was a remarkable achievement to have developed and put into production on a scale of the order of one ton per day a process transforming grossly impure commercial oxide to oxide of a degree of purity seldom achieved even on a laboratory scale."

By the fall of 1942, the need was for uranium metal—and lots of it. The Manhattan Project had been created, and a chain of supply had been set up in the country, starting with normally available uranium products and going on, through the oxide step, all the way to metal. DuPont, Harshaw, Electromet, Linde, Iowa State College and many other organizations had been working on various phases of uranium production. But still more output was needed. Some of these companies built new plants for oxide production. Mallinckrodt's operations were expanded to include uranium metal production. Technical information was freely exchanged among these cooperative groups, with the result that their combined production supplied the uranium needed for the atomic energy program.

V-J Day left us with a miraculous achievement, a great and threatening secret—and hope for a bright new future with atomic energy as a peace-time ally. But the job was still unfinished. To ensure an adequate supply of uranium, the

United States must be able to process any uranium-containing raw material—domestic or imported, crude or refined—in the amounts needed. This meant the development of new processes, the designing of new equipment, and the construction of new plants. A challenging engineering problem loomed on the horizon.

With the war over, production of uranium metal was centralized, and it fell to Mallinckrodt to apply the accumulated experience, that of others as well as their own, to the development and integration of processes for producing pure metal from ores. Leading engineering and construction firms were called in. In cooperation with Mallinckrodt chemists and engineers, and under the sponsorship first of the Army, later of the Atomic Energy Commission, new facilities were designed and built by such firms as Singmaster & Breyer, Wigton-Abbott, Blaw-Knox and others—facilities that have since been operated continuously by Mallinckrodt at ever lower cost, and have been the prototypes for others subsequently built.

This is an important part of America's atomic energy story, and the story of a Mallinckrodt assignment—Project 42-17. Its significance to American industry is this: Mallinckrodt was given a tough job of critical importance—the job of supplying tonnages of highly purified materials, regularly, and at a reasonable cost. The job was done, on time, with superlative results. Much of the research and process development was a product of Mallinckrodt's own team, drawing whenever possible upon the experience of others engaged in similar problems. The engineering and construction became a joint enterprise which brought together a wealth of know-how and experience.

*Talent, skill in research and production, and the capacity to work with specialists in related fields are the hard core of Mallinckrodt's creative fine chemical business. This ability is available to American industry today, as it has been since 1867.*

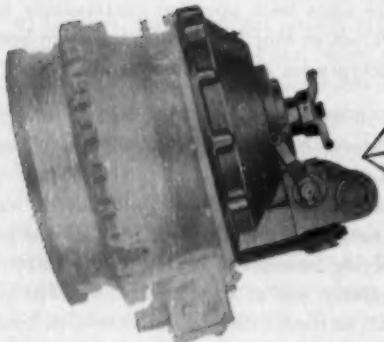
**Mallinckrodt®**

*Your assignment can be accomplished as thoroughly and as confidentially as Project 42-17. If you have a problem that involves pure chemicals—organic or inorganic—*

*write to the Mallinckrodt Chemical Works, St. Louis, Missouri.*

*Mallinckrodt Street, St. Louis 7, Mo. • 72 Gold St., New York 8, N. Y. • Chicago • Cincinnati  
Cleveland • Los Angeles • Philadelphia • San Francisco • In Canada: Toronto • Montreal*

# Faster, safer downhill hauling with New **Allison Torqmatic Brake**



**Speeds job-cycle time—  
cuts maintenance costs—no wearing parts  
cuts service brake lining wear**

ALLISON'S new TORQMATIC BRAKE brings faster, safer downhill hauling to heavy-duty trucks. On-the-job tests prove that in many cases drivers can more than double present downhill speeds with complete safety. This new dynamic brake speeds job-cycle time for more trips per shift—more pay loads per day.

#### Proved in Field Tests

This revolutionary new TORQMATIC BRAKE increased round trips 50% per day on year-long tests. Trucks safely came down a 10% grade with a 34-ton load at 12 miles per hour compared to 6 m.p.h. for trucks with friction brakes only. With the TORQMATIC BRAKE, the regular service brake linings lasted from 6 to 8 months—without it they required monthly replacement.

#### Increased Safety—Better Control

There are no active braking parts to burn up or wear out in the TORQMATIC BRAKE. Drivers have complete control at all times—can brake continuously even going down the steepest grades with the heaviest loads. Trucks never "run away" from the driver. The truck's own rolling force produces the braking power needed, to the limit of the driveline components' strength.

#### Works on Oil

Oil does all the braking work—absorbs all the braking force. The new TORQMATIC BRAKE takes over from friction brakes on downhill hauls, saves regular service brakes for complete stops or "snubbing" on curves. It's



# Allison



**ALLISON'S NEW TORQMATIC BRAKE,** attached directly to the TORQMATIC Converter, has three major parts—a turning rotor (or "paddle wheel") attached to the torque converter; non-moving or fixed stator vanes cast into the brake housing; and a control valve.

**Here's How it Works:** To brake a truck going downhill, the driver pulls the handy control lever to let oil into the brake. The truck's wheels turn the rotor or "paddle wheel" through the truck's transmission. The rotor throws the oil against the stator vanes which resist the oil flow. This makes it harder for the rotor to turn and correspondingly makes it harder for the truck's wheels to turn. The driver gets more braking by letting more oil into the brake. He reduces braking by reducing the amount of oil in the brake. The new brake provides up to 400 h.p. of continuous braking effort.

the *first* downhill braking unit designed and installed as an integral part of the truck's driveline. It bolts directly on the TORQMATIC Converter housing—adds only 4 inches to the converter's length. The brake and converter use the same oil. There are no freezing problems in winter. The TORQMATIC BRAKE can be specified in new trucks equipped with Allison TORQMATIC DRIVES.

If you're hauling on hilly, mountainous downhill runs, you can cut costs and increase production with Allison's new TORQMATIC BRAKE. For full details, contact your truck manufacturer or write for Bulletin SA 1026 to:

ALLISON DIVISION OF GENERAL MOTORS  
Box 894B, Indianapolis 6, Indiana

# **TORQMATIC BRAKE**

**NEWEST MEMBER OF THE TORQMATIC DRIVELINE**

**First Again!**

**Mobil-Matic MOBILIFT**

with OIL-SMOOTH Constant-Mesh Transmission  
Engineered Especially for FORK TRUCKS



**First** with an Oil Immersed Multiple Disc Clutch especially designed for fork trucks.

**First** with Lev-R-Matic—No Gear Shift...No Clutch Pedal ...ONE-Lever Control.

**First** with FREE LIFT to give maximum lifting height before inner mast raises.

For years Mobilift users have benefited by Mobilift "firsts". Mobilift consistently sets the trend in bringing engineering progress to the field of fork lift trucks. Every part of a Mobilift is designed and built for rugged use and to give maximum performance at the lowest operating costs.

## First Again!

### with *Mobil-Matic* DRIVE

The oil-smooth, high and low range, constant mesh transmission with fluid coupling to the Chrysler 6-cyl. engine. There's *NO CLUTCH PEDAL*—just ONE direction selector lever.

### First with HYDRA-LIZER

The hydraulic equalizer on the steering wheels for cross-compensating truck and load over bumps...

GIVES YOU THIS...



NOT THIS



**MODEL D-426**  
4,000-lb. cap. at 24"  
Load Center, 83" Mast,  
128" Lift, 64" Free Lift.



And FIRST with ONE-PIECE HOOD that raises easily for full access to engine compartment.

#### WRITE TODAY

for complete details on the New Mobil-Matic MOBILIFT or contact your nearest Lamson-Mobilift office.

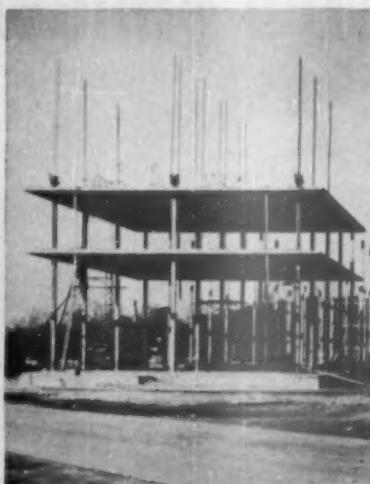


**LAMSON MOBILIFT CORPORATION**

835 S. E. MAIN STREET • PORTLAND 14, OREGON

- 2317 W. 18th, CHICAGO
- 790 PATTERSON AVE., E. Rutherford, N.J.
- 2724 TAYLOR ST., DALLAS
- 1113 SPRING ST., N.W., ATLANTA
- 2730 SAN PABLO AVE., BERKELEY

## READERS REPORT



### Lift-Slab Construction

Dear Sir:

Re your statement [BW—Dec. 26'53,p50] that the "lift-slab method" of building construction will be applied for the first time in the East . . . the above picture shows one of two buildings under construction by our company, at the U.S. Naval Amphibious Base at Little Creek, Va. The two buildings will have a combined lift-slab area of 318,000 sq. ft., and will house 2,400 men . . . they are scheduled for completion in June, 1954.

OSCAR BECKER

CHIEF ENGINEER

LANG CONSTRUCTION CO., INC.  
HAMPTON, VA.

### A Matter of Prudence

Dear Sir:

"Selling a house can be a tricky business."

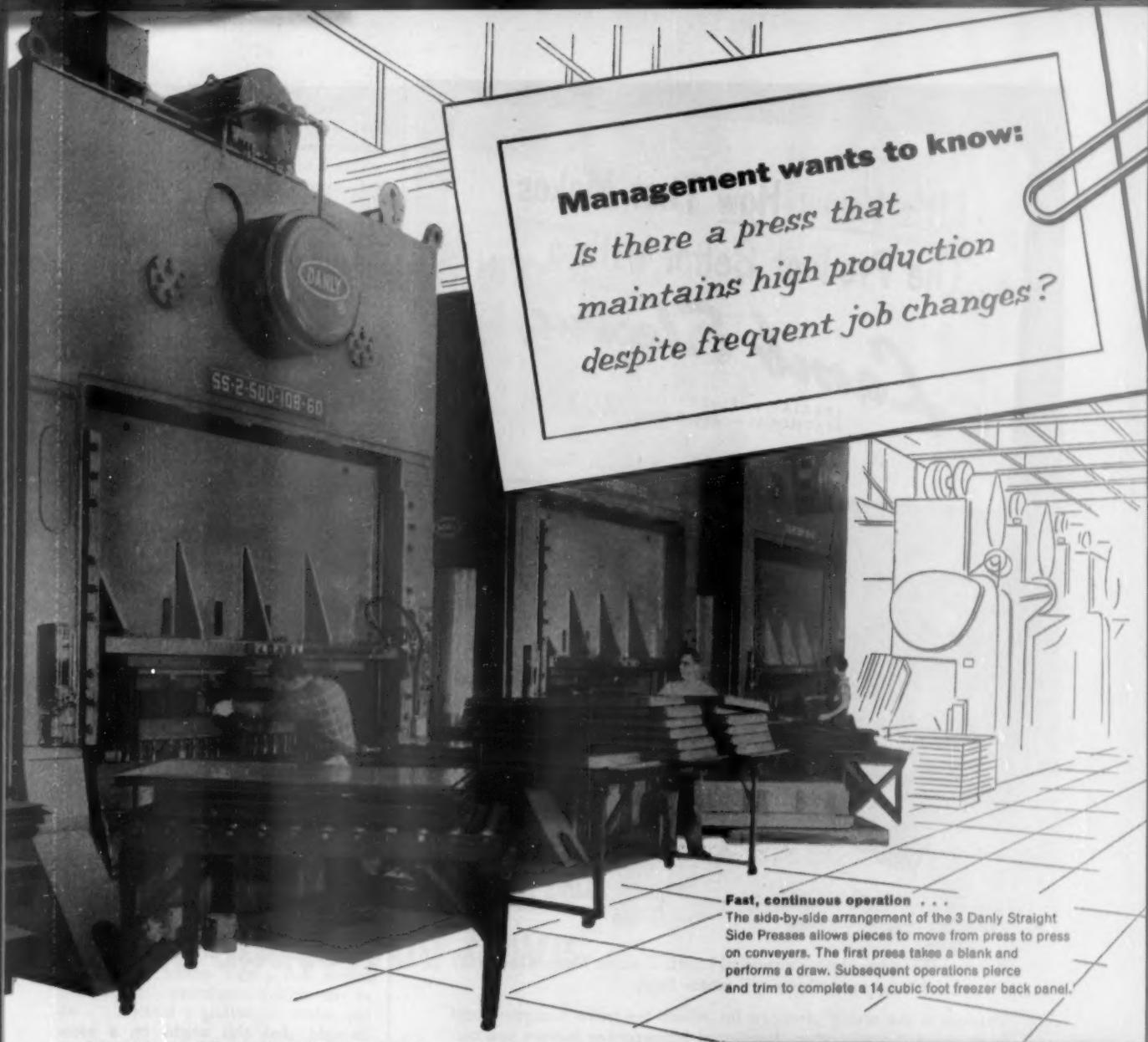
"Safest move is to let your lawyer handle the sale."

Both these statements appear in your issue of Jan. 9, page 131, under Personal Business. These are statements that condemn an entire industry. . . . Such assertions are utterly unjustified by the facts, and their publication is a disservice not only to our business, but to the home buyers and home sellers of the nation.

We have spent 40 years building our National Assn. of Real Estate Boards, primarily for the purpose of bringing security and integrity to real estate transactions. . . .

We have helped to develop a mortgage system that makes home purchase much easier and safer through a vast program of insured mortgages. This has doubled the number of home owners in the last 15 years.

We have encouraged title insurance,



*GENERAL ELECTRIC COMPANY* meets tight schedules  
on a wide variety of large stampings with

## DANLY PRESSES

Today it's 14 cubic foot freezer backs . . . tomorrow it may be any of 15 other stampings. With such frequent job changes and schedules pushing capacity to the limit, GE faced the problem of keeping production high and down-time losses low.

The solution? They found it in Danly 500-ton Straight Side Presses . . . setting new performance standards in meeting the demands of one of the most intensely competitive markets in American Industry . . . demands for uninterrupted production runs with minimum down-time for job changes or routine maintenance.

This story is being repeated in leading stamping shops from coast to coast . . . proof it pays top management men to be cost conscious instead of price conscious in picking mechanical presses.

**DANLY MACHINE SPECIALTIES, INC.**

2100 South Laramie Avenue, Chicago 50, Illinois

**It costs less to run a DANLY PRESS!**

**Fast, continuous operation . . .**  
The side-by-side arrangement of the 3 Danly Straight Side Presses allows pieces to move from press to press on conveyors. The first press takes a blank and performs a draw. Subsequent operations pierce and trim to complete a 14 cubic foot freezer back panel.

**DANLY**

MECHANICAL PRESSES  
SINGLE, DOUBLE, TRIPLE ACTION  
AUTOFEED . . . UNDERDRIVE

If your manufacturing process involves high production and expensive dies, it will probably be worth your while to talk with a Danly Press Engineer. Call now—he will be glad to discuss your specific problems. There is no obligation for this service.

**It's Know-How That Makes  
The Product Better with a...  
*Lamb Electric***

SPECIAL APPLICATION  
FRACTIONAL HORSEPOWER MOTOR



Universal motor parts for portable electric tools, business machines and some household appliances.



This fan motor has rubber grommets supporting lugs to assure quiet, vibrationless operation.



A ruggedly constructed motor widely used in the field of mechanized equipment.



Geared head motor with reversing switch, adaptable to many heavy-duty, slow-speed applications.

Back of the good performance of Lamb Electric Motors is our 38 years' experience in the small motor field.

Typical of the many products for which we have designed and built special application, fractional horsepower motors are aircraft components, business machines, home appliances, industrial and commercial equipment, machine tools and portable electric tools.

Our long and specialized experience working with manufacturers to provide a motor with the exact requirements for the application is available to help solve your motor problems.

The Lamb Electric Company • Kent, Ohio

In Canada: Lamb Electric — Division of Sengen Company Ltd., — Leaside, Ontario

THEY'RE POWERING AMERICA'S *FINEST* PRODUCTS

*Lamb Electric*

which is now customary in most communities, so as to give buyer and seller alike security as to the legal phases of transactions.

Cases of "tricky business" are very rare among the three million homes that are sold every year.

What you advocate would mean putting most of our realtors out of business. It is the business of a broker to negotiate and handle transactions. In our own code of ethics we admonish the broker that wherever the interests of either party to a transaction require it, legal advice should be obtained.

We do not know of any cases where a charge of a commission and a half occurs without the knowledge and consent of buyer and seller.

HERBERT U. NELSON  
EXECUTIVE VICE-PRESIDENT  
NATIONAL ASSN. OF REAL ESTATE BOARDS  
WASHINGTON, D. C.

Dear Sir:

. . . The realtors, who all belong to the National Assn. of Real Estate Boards, are certainly as capable of selling a house (which I prefer to call a home) as any lawyer.

When you are sick you call your physician

When you have a toothache you go to your dentist

When you need legal advice you go to your lawyer

When you want to buy or sell real estate see a realtor

When you want business information, subscribe to BUSINESS WEEK

Need I say more?

SAM J. GERBER

PITTSBURGH, PA.

Dear Sir:

My company, like a good many others, has a rack service for the use of our fellow employees. In reading the article on selling a house . . . we thought that this might be a piece which could be put in the racks. . . .

H. R. BOWMAN  
MANAGER OF INDUSTRIAL RELATIONS  
DICTAPHONE CORP.  
BRIDGEPORT, CONN.

• For most people the purchase of a home is the largest single financial transaction in their whole lives. No matter how reliable are the agents involved in the deal, it seems to us a matter of common prudence to have available the advice and assistance of one's own attorney—whose interests are not divided between purchaser and seller but are exclusively directed toward his client.

**The Price Tag**

Dear Sir:

We appreciate your compliment on page 59 of the Jan. 9 issue, which puts



These free-standing J-M Movable Walls permit maximum use of space. They create efficient offices that can quickly and easily be rearranged to suit the needs of changing space requirements.

## For the offices you need in the space you have

### **Johns-Manville Asbestos Movable Walls provide offices when and where you want them**

YOU can rearrange your present space or have new space partitioned off quickly and economically with Johns-Manville Asbestos Movable Walls. Made of asbestos, they resist fire, rot and wear.

These flush-type, attractive panels have a clean, smooth surface that's hard to mar, easy to maintain...

and extra strong to withstand shock and abuse. Also, they are light in weight, easy to install and relocate. The "dry wall" method of erection assures little or no interruption to regular routine.

Johns-Manville Asbestos Movable Walls may be used as ceiling-high or free-standing partitions. The

complete wall, including doors, glazing and hardware, is installed by Johns-Manville's own construction men under the strict supervision of trained J-M engineers... responsibility is undivided.

An estimate will convince you that the cost of J-M Movable Walls compares favorably with other types of wall construction. For details write, Johns-Manville, Dept. BW, Box 158, N. Y. 16, N. Y. In Canada write 199 Bay St., Toronto 1, Ont.

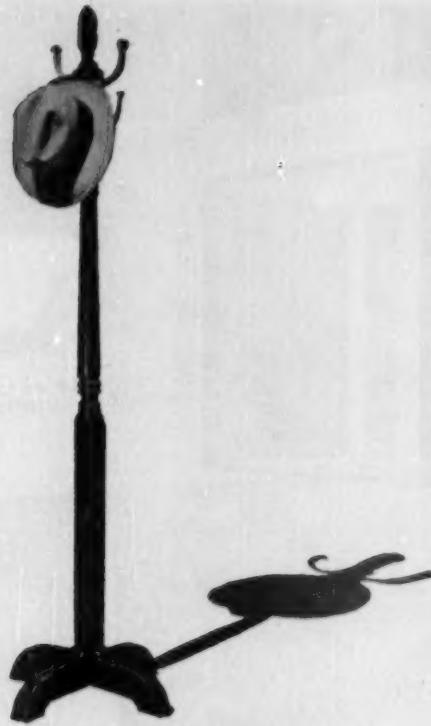


# Johns-Manville



# Movable Walls

INSTALLED NATIONALLY BY JOHNS-MANVILLE



## Your open door is a respected privilege

*The Durez field representative who accepts an invitation to talk with you comes from a firm that values his time and yours...*

He is unusually well-equipped to render you service involving the profitable use of phenolics in your products, as he speaks for a company that has specialized in these materials from the industry's earliest days.

Apprised of your specific purpose, Durez men can tell which phenolic molding compound among the hundreds commercially used — which industrial or coating resin — will meet your needs best in cost and perform-

ance. Their counsel in engineering aspects of plastics design may save you from unforeseen problems.

You may be investigating the inherent advantages of these materials for the first time. You may be a long-time user of them. In either case, a talk with your Durez man puts our 32 years of experience at your disposal. Write...and ask for our monthly "Plastics News." Durez Plastics & Chemicals, Inc., 4001 Walck Road, North Tonawanda, N.Y.

**DUREZ**

**PHENOLIC PLASTICS**  
THAT FIT TODAY'S  
PRODUCTS  
for the New Era of  
Competition

**MOLDING COMPOUNDS.** Familiar in thousands of products built for rugged service in daily use.

**RESINS FOR INDUSTRY.** Bonding, casting, coating, laminating, impregnating, and shell molding.

MOLDING COMPOUNDS. Familiar in thousands of products built for rugged service in daily use.

RESINS FOR INDUSTRY. Bonding, casting, coating, laminating, impregnating, and shell molding.

us two years ahead of the whole television industry. . . .

Much as we would prefer to sell our Easy-Vision color receivers for less money, we are continuing to list them at \$1,200 for the first models . . . [not \$700]. . . .

Dealers who saw the New Year's Day colorcast on Hoffman sets in twelve areas across the nation were more enthusiastic than anyone predicted, as to sharpness of color picture and quality of color. . . .

We like to think of Hoffman as being like BUSINESS WEEK—ahead of the pack in a highly competitive field, but in this case we would prefer to return, as gracefully as your columns will permit, to the position of selling our first Easy-Vision color sets at \$1,200. . . .

DON LARSON

ADVERTISING DIRECTOR  
HOFFMAN RADIO CORP.  
KANSAS CITY, MO.

- Sorry—we had the price too low.

### Siding Cushion

Dear Sir:

Re the story in your Dec. 19 issue (page 100) about Fiberglas Siding Cushion . . . this new product is in no respect designed . . . to supersede thermal insulations such as are installed in sidewalls by the blowing process.

Actually, Fiberglas Siding Cushion is an underlay material (competitive with certain paper products) that contributes to the easier application and neater appearance of siding on existing homes. It serves as a noise deadener and contributes some exterior fire safety.

While also lending some insulating value, however, Fiberglas Siding Cushion is not primarily designed to serve the heat barrier functions of such products as Fiberglas batts and blankets or blowing wool.

SHERMAN STAMBAUGH  
OWENS-CORNING FIBERGLAS CORP.  
TOLEDO, OHIO

### Correction

An article in our Jan. 2 issue on Christmas sales contained the following: "They cited the slowness in toy sales, until Gimbel's bought up Firestone stocks and put them on sale with prices slashed as much as 50%."

This statement was obtained from a firsthand source but turned out to be incorrect.

Firestone reports that it had a very successful toy season and that its toy carryover was lower than any time in the past five years.

# Mullins U.S.A. licenses German firm to use the revolutionary new Mullins Steel Koldflo\* Extrusion Process

**T**ODAY—there's a *new way* to make precision cylinders and countless other metal parts. A new process that speeds production—cuts manufacturing costs—and will improve the products *you make!*

Squeezing cold steel into industrial products, long a dream of the metalworking industry, is now a reality!

It's another *first* for Mullins. Another triumph for American engineering skill. It's the truly sensational new MULLINS STEEL *Koldflo* process that literally makes cold steel perform miracles!

Mullins, maker of auto parts and kitchen equipment, has developed *Koldflo—the first workable and practical process* for the mass production of precision metal parts, with glass-smooth surfaces and exacting tolerances.

Already *Koldflo* is outmoding old-fashioned methods with their costly, time-consuming machining, heat treating, grinding and honing operations.

*Koldflo* turns out one perfect glass-smooth

cylinder after another with almost unbelievably exact tolerances!

That's why Kabel und Metallwerke, Neumeyer of Nurnburg, one of the first companies in the world to successfully cold extrude steel, wanted the license to use the *Koldflo* process. That's why they stated: "*This new Mullins process is entirely novel and more advanced than any other we have studied.*"

Now, with expanded facilities, supported by Mullins' engineering and development departments—we offer industry complete parts manufacturing facilities using the proved *Koldflo* process.

Write for complete information and descriptive literature. We will gladly demonstrate what *Koldflo* can do for you. Write to Dept. BW-1.

## *Koldflo* DIVISION

MULLINS MANUFACTURING CORPORATION

*Salon, Ohio*



Accumulator and booster shells for presses



S. A. E.-clevis and power steering cylinders



Accumulators for hydraulic power systems

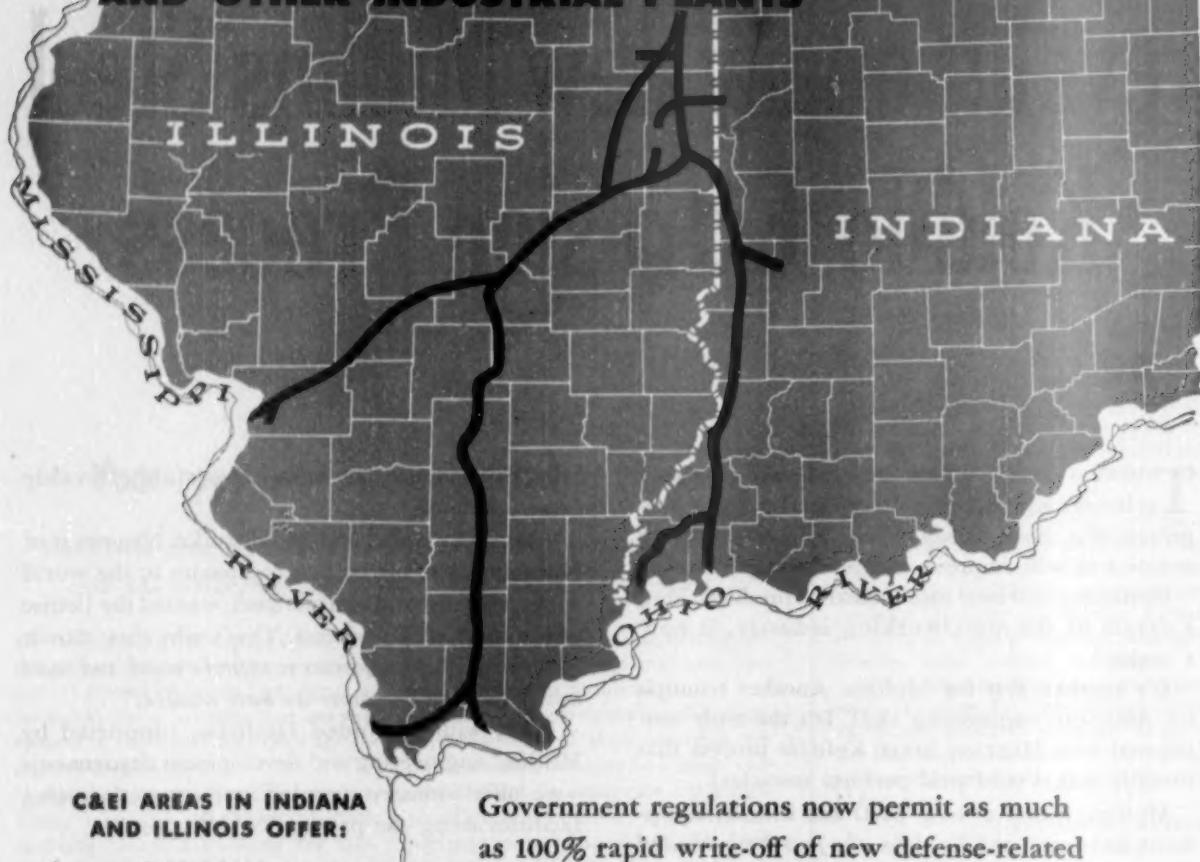


Lift truck stud-type tilt cylinder shells

\**Koldflo* is a Trade Mark of the Mullins Manufacturing Corp.

# **100% fast write-off here**

**FOR NEW CHEMICAL, METAL  
AND OTHER INDUSTRIAL PLANTS**



**C&EI AREAS IN INDIANA  
AND ILLINOIS OFFER:**

Large available labor force.

Millions of kw capacity at  
attractive rates.

Tremendous, economical fuel supply.

Railroads, river barge lines,  
good highways.

Unlimited industrial water supply.

Proximity to major market areas.

Government regulations now permit as much as 100% rapid write-off of new defense-related industrial plants in areas served by the Chicago & Eastern Illinois Railroad.

For a list of these C&EI communities and their outstanding industrial advantages, write—in confidence—to Chief Economist, Chicago & Eastern Illinois Railroad, 332 South Michigan Avenue, Chicago 4, Illinois.



**CHICAGO & EASTERN ILLINOIS RAILROAD**



THAT'S WHAT YOU  
SAVE WHEN YOU

# Simplify AND Save

THE  
PURE OIL WAY!

## 6-WAY SAVINGS!

1. Reduced inventory
2. Non-mysterious simplified lubrication
3. Labor cost reduced
4. Simplified inventory control
5. Errors in application reduced
6. Simplified, speeded-up purchasing

Be sure with Pure — Sales offices located in more than 500 cities in Pure's marketing area.

Hundreds of plants already are saving real money by reducing their inventory from dozens of different oils and greases to a few Pure Oil multi-purpose lubricants—lubricants scientifically formulated to do many different jobs equally well.

Investigate the savings possible in your own plant with this *simplified* lubrication program. Pure Oil industrial specialists will be glad to help you set up a money-saving, labor-saving procedure tailored to your particular plant needs.

Our booklet, "Simplify and Save" will give you facts and information leading to proper lubrication plus extra savings.

*It Starts Here!*



# PURE OIL INDUSTRIAL LUBRICANTS

## FREE BOOKLET

The Pure Oil Company, Industrial Sales Dept. B-41  
35 E. Wacker Drive, Chicago 1, Illinois  
Please send me your free booklet on how to "Simplify and Save".

NAME \_\_\_\_\_

POSITION \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



# HOW HERCULES HELPS...

Hercules' business today helps almost everyone's business. It embraces the production of synthetic resins, cellulose products, chemical cotton, terpene chemicals, rosin and rosin derivatives, chlorinated products, and many other chemical processing materials—as well as explosives. Through close cooperative research with its customers, Hercules has helped improve the processing or performance of many products. If you are a manufacturer, we welcome the opportunity to work with you.



► Paper towels absorb more moisture without falling apart when Hercules Kymene® resins are added in manufacture. These resins, a few of many of Hercules' varied papermaking chemicals, help improve many other types of wet-strength papers and paperboard, including map paper, V-board, and bag papers.

## ...TO GREASEPROOF FLOOR TILE



## ...TO IMPROVE AUTOMOBILE FINISHES



► Vinyl and asphalt-type floor tiles are processed with Neolyn® or Mastolyn® resins to give them "built-in" resistance to both grease and alkalies, while lowering manufacturing costs.

► Lacquer made with nitrocellulose and other Hercules ingredients gives more and more cars, trucks, and buses their lustrous, longer-lasting beauty. No other finish dries so fast.

HERCULES

HERCULES POWDER COMPANY 968 Market St., Wilmington 99, Del.  
Sales Offices in Principal Cities



G54-1

# BUSINESS OUTLOOK

BUSINESS WEEK  
JAN. 30, 1954



Your two most favorable business indicators, at the moment, are to be found in the financial markets:

- Stock prices this week were poised for a try at new high ground.
- Money rates were sagging, in some cases very substantially.

This stock market has a lot of people talking (even people who belittle its ability as a forecaster when it happens to be declining).

In brokers' offices you hear this buzz: "The market has never anticipated a business upturn by more than six months; does that mean the business slide will be over by March?"

There it is. The rise in the index of common stock prices, virtually uninterrupted to date, would be six months old by mid-March.

Then again, maybe the stock market isn't forecasting anything. Maybe it's just showing appreciation for friendly treatment.

Business and personal taxes already have been cut. A more liberal depreciation policy is evolving. Some aid seems likely on double taxation of dividends. Even capital gains might, one day, benefit by changes.

You run into that poor, tired word "climate" again. The GOP is supposed to favor business, and this looks a lot like a "Republican market."

Easier money, as everyone knows, is partly a matter of official policy. Washington doesn't want to be blamed for causing a recession due to a harsh attitude on credit.

The easiness now, however, has some other factors in it.

Money usually is easier to get at this time of year. To cap it, needs for funds are even less than usual. Industry is paring inventory rather than adding to it. This boosts repayments.

You saw this week how easy money was, at least for short-term use, when the Treasury borrowed at an interest cost of less than 1% on its weekly offering of bills (page 94). That was the lowest in 4½ years.

At the same time, commercial paper rates were being cut.

**Big New York banks still say they won't cut their "prime rate."**

That's natural. They don't want to announce in advance a lower rental on their choicest business loans. Moreover, tighter money over the Mar. 15 tax date may help them to defend the prime rate.

— • —  
Labor circles may be letting out some class-conscious hoots at the financial markets. Things haven't turned favorable, employmentwise.

As recently as last September, major areas with "tight" or "balanced" labor supply were almost as numerous as those with surpluses. This week, however, Washington listed surplus areas as a 2 to 1 majority.

Layoffs have been a little less numerous, perhaps, the last few days.

# BUSINESS OUTLOOK (Continued)

BUSINESS WEEK  
JAN. 30, 1954

However, this week's highlight was the big batch of workers let out at Chrysler. This auto company happens to be Detroit's largest employer, and its furloughings touched up an already well-publicized situation.

You haven't heard of any layoffs around Ford or Chevrolet. Nevertheless, there are evidences that Ford is cutting its overtime bill.

Trade reports are that Ford operated only three plants last Saturday; the week before, 15 ran on Saturday in the drive for output.

Chevrolet stepped up manufacturing as Ford slacked off. Nearly 32,000 Chevies were turned out last week while Ford fell below 29,000; for the year to date, both top 90,000 and they're a scant nose apart.

On the month, by the way, Buick will pass Plymouth for third place.

—•—

Business failures can be made to look high—Dun & Bradstreet lists liabilities of \$394-million for 1953. That's the biggest since 1933.

Liabilities were \$100-million above 1952, and last year's figure compares with \$310-million for 1949.

But relate the dollars in failures to the dollar size of the economy: Liabilities last year were about \$1,000 for each \$1-million of goods and services produced. The ratio was \$1,200 per million of gross national product in 1949, and \$8,000 per million in 1933.

Failures last year were most numerous among retailers in automotive lines (520 against 302 in 1952) and in home furnishings (711 vs. 428).

—•—

New businesses have been born in the postwar years at a much more rapid rate than they have died (or retired).

At last count, the Dept. of Commerce put the total business population at 4.2-million firms of all types. This was 970,000 higher than the war-pinned figure at the end of 1945.

About two-thirds of the net growth came in 1946 and 1947. For 1948 through 1953, the average net gain was 50,000 a year.

It's well known that every man thinks he can run a store. So 40% of the growth of new businesses since World War II has been in retailing—a rise of about 400,000 such outlets for a total of 1.9-million.

Next in line comes a gain of 234,000 firms in contract construction. This brings the total to 434,000, a thumping gain of 118%.

Business population, incidentally, has topped postwar customer growth. While we have added 14% in population, business firms are up 30%.

After the war, we had one business concern for every 45 people. Now we have one firm for every 38 members of the population.

Our new entrants in business have at least had a crack at a lot of volume. In 1953, turnover in goods and services averaged \$90,000 per business firm; it had been \$70,000 in 1947 and \$30,000 in 1940.

Contents copyrighted under the general copyright on the Jan. 30, 1954, issue—Business Week, 330 W. 42nd St., New York, N. Y.



© GF Co. 1953

## GF adds to his VF\*

\**VALUE FACTOR*

*Every key executive will do a better job for you with  
the restful help of a GF COMFORT MASTER office chair*

Put every right-hand man in a comfortable, individually adjustable GF Comfort Master chair. He'll feel better, work better and be even more valuable to you.

Comfort Master, built of sturdy, welded aluminum for a lifetime of service, is actually "tailored" to fit the individual...thanks to its 5-adjustment feature, a GF exclusive.

Better breathing, back support and body

balance come with Comfort Master. Remember, your key executives will spend 15,000 to 20,000 hours in those chairs in the next 10 years. So it costs you only pennies a day to provide them with efficient comfort for efficient work.

Try a handsome Comfort Master for 10 days with no obligation. Call your nearest GF Distributor or write The General Fireproofing Company, Dept. B-25, Youngstown 1, Ohio.

*Good metal business furniture is a good investment*

**GENERAL FIREPROOFING**  
*Foremost in Metal Business Furniture*

MODE-MAKER DESKS  
GOODFORM ALUMINUM CHAIRS  
METAL FILING EQUIPMENT  
GF STEEL SHELVING

Plastic  
coated  
elbow...  
made  
to  
measure

You'd hardly call the manufacture of stainless steel elbows, for surgical implants, a common thing. But even more unusual is the use of a plastic substance called KEL-F\*, as a protective coating for the stainless steel.

This plastic withstands extreme heat as well as cold. It is chemically non-corrosive, will not absorb moisture and resists electricity. In short, KEL-F appears to resist almost every known element yet is extremely flexible in its industrial applications.

In the development of this unusual product, scientists of The M. W. Kellogg Company met a number of problems, insolvable by ordinary chemical methods. To guide them in their work, these men turned to equipment engineered by North American Philips Company, a leader in the field of electronic research.

**NORELCO X-ray Diffraction Is the answer**

The basic characteristics of any material can be determined by study of its atomic structure. Employing non-destructive NORELCO X-ray Diffraction as an advanced laboratory tool, these scientists quickly and effectively analyzed the elements needed for a successful formula. They were also able to predict how KEL-F would stand up in use while still in the test-tube stage.

**NORELCO serves science and industry**

In every facet of industry, manufacturers—large and small—find profitable application for NORELCO X-ray Diffraction. From new product engineering in the laboratory through production control on a finished item, it has literally hundreds of uses. No doubt you can find time- and money-saving jobs for NORELCO X-ray Diffraction in your field. NORELCO products distinguished by precision manufacture, creative engineering and imaginative thinking include: Research and

Control Instruments, Electron Microscopes, Industrial Radiographic Equipment, Metallurgical Products and Diamond Dies, Electronic Tubes, Precision Timing Motors and Timing Devices.

Non-destructive NORELCO X-ray Diffraction and Spectrographic equipment can aid your organization. The technical staff of North American Philips Application Laboratories is available for free consultation. Write also for booklet "Three Powerful X-ray Tools."

\*Registered Trade-mark  
of The M. W. Kellogg Company

**Many Users, Many Uses**

University of Arizona • Baker & Co., Inc. • Bendix Aviation Corporation • The Consolidated Mining and Smelting Company of Canada Limited, Trail, Canada • Crucible Steel Company of America • Eli Lilly and Company • Mount Sinai Hospital • Olin Industries, Inc. • Owens-Illinois Glass Company • Polaroid Corporation • Radiofysiska Institutionen, Stockholm, Sweden • Standard Piezo Company • United States Steel Corporation • University of Virginia

*Norelco*

Serving Science  
and Industry

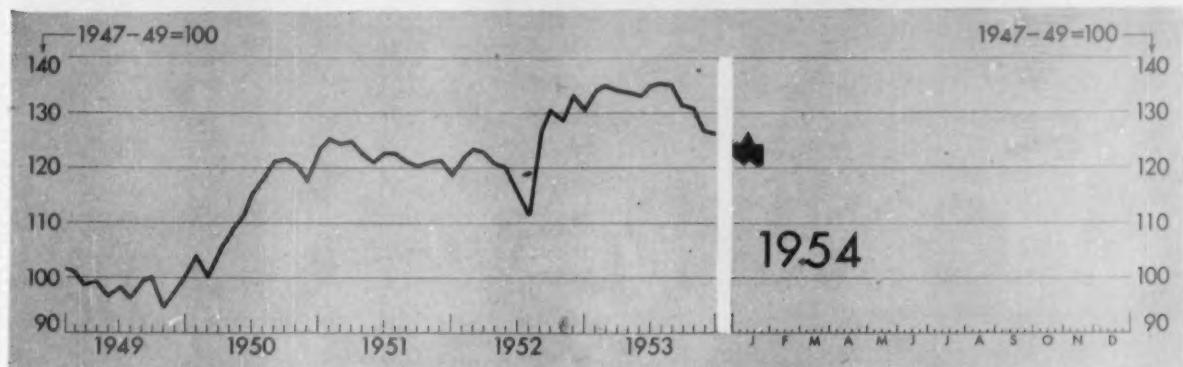


**NORTH AMERICAN  
PHILIPS COMPANY, INC.**

• Dept. B-7 — 100 East 42nd Street, New York 17, N. Y.

In Canada: Rogers Majestic Electronics Ltd., 11-19 Brentcliffe Road, Leaside, Toronto 17, Canada

# FIGURES OF THE WEEK



**Business Week Index (above) . . . . .**

Latest Week	Preceding Week	Month Ago	Year Ago	1948 Average
*124.7	+124.7	125.1	135.0	91.6

## PRODUCTION

Steel ingot production (thousands of tons).....	1,760	+1,766	1,706	2,240	1,281
Production of automobiles and trucks.....	151,567	+149,841	92,247	149,550	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$31,930	\$32,542	\$55,296	\$68,059	\$17,083
Electric power output (millions of kilowatt-hours).....	8,976	9,014	8,174	8,144	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,292	6,333	6,234	6,492	4,751
Bituminous coal production (daily average, thousands of tons).....	1,363	+1,365	1,383	1,593	1,745

## TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	63	64	64	72	82
Carloadings: raw materials (daily av., thousands of cars).....	40	40	39	45	53
Department store sales (change from same week of preceding year).....	-8%	+6%	-1%	+2%	+30%
Business failures (Dun and Bradstreet, number).....	208	200	162	173	22

## PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	418.3	418.3	414.5	405.2	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100).....	81.5	82.3	82.7	90.7	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100).....	96.4	97.2	98.1	86.2	††75.4
Finished steel, index (U. S. BLS, 1947-49 = 100).....	141.3	+141.4	141.4	130.7	††76.4
Scrap steel composite (Iron Age, ton).....	\$27.67	\$28.50	\$30.17	**\$42.00	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.).....	29.95¢	29.960¢	29.925¢	24.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.38	\$2.37	\$2.38	\$2.40	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	33.43¢	33.19¢	32.72¢	32.72¢	30.56¢
Wool tops (Boston, lb.).....	\$2.12	\$2.12	#	\$2.10	\$1.51

## FINANCE

90 stocks, price index (Standard & Poor's).....	206.0	202.5	196.2	207.1	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.69%	3.71%	3.74%	3.52%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	2 1/4%	2 1/4%	2 1/4%	2 1/4-2 1/2%	2 1/4-1%

## BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	56,090	56,044	55,679	55,738	††45,820
Total loans and investments, reporting member banks.....	79,838	80,376	80,896	78,728	††2,036
Commercial and agricultural loans, reporting member banks.....	22,686	22,846	23,361	23,087	††9,299
U. S. gov't guaranteed obligations held, reporting member banks.....	32,987	32,870	32,696	32,453	††49,879
Total federal reserve credit outstanding.....	26,412	26,230	27,692	25,904	23,883

## MONTHLY FIGURES OF THE WEEK

Cost of Living (U. S. BLS, 1947-49 = 100).....	December.....	Latest Month	Preceding Month	Year Ago	1948 Average
		114.9	115.0	114.1	83.4

\* Preliminary, week ended January 23, 1954.  
\*\* Basing pt., less broker's fee.

† Revised.  
†† Estimate.

## Insufficient trading to establish a price.  
Date for "Latest Week" on each series on request.

# in BUSINESS this WEEK . . .

## GENERAL BUSINESS:

HIGH HOPES, BACKSTOPPED. Eisenhower's view of the 1954 business situation ..... p. 25

AIR PROGRAM TAKES THE LEAD. Defense contractor ratings point up the big move to air power ..... p. 26

CIVIL RIGHTS: A WARY APPROACH. On race problems the Administration is acting, but saying little ..... p. 27

CBS COLOR AGAIN. Here comes another T-V gang war ..... p. 28

## BUSINESS ABROAD:

RANDALL STIFFENS THE FREER TRADE RANKS. The Commission's recommendations: Cut tariffs, boost imports ..... p. 118

WHO'LL MAKE FOREIGN POLICY? A look at the Bricker Amendment ..... p. 121

GM EXPANDS IN BRAZIL, TOO. It gets tougher and tougher to import ..... p. 122

Business Abroad Briefs ..... p. 123

## COMMODITIES:

NEW PACT MAY SWEETEN WORLD SUGAR PRICE. The Senate will make the decision ..... p. 138

IMPORTS WORRY STEEL MEN. Nobody worried two months ago, but now the industry's jittery ..... p. 144

Commodities Briefs ..... p. 146

## COMPANIES:

MARATHON CORP.: NEW LINE, NEW MARKET. It's a company to watch. ..... p. 148

Companies Briefs ..... p. 150

## ECONOMICS:

MAN LOOKING FOR TROUBLE. That's Colin Clark, today's most pessimistic economist ..... p. 84

## FINANCE:

WHO'S THE BOSS OF CHESSIE

	Page
Business Outlook .....	17
Washington Outlook .....	37
International Outlook .....	115
Personal Business .....	135
The Trend .....	152
Figures of the Week .....	21
Local Business .....	112
Readers Report .....	8

NOW? Robert R. Young sells out, but some think there will be little change of management ..... p. 90

Finance Briefs ..... p. 98

## LABOR:

NEXT BARGAINING LINE: Ability to pay. Unions will play down the cost-of-living index ..... p. 126

T-H HEARINGS: BIG CAST, NO DRAMA. The odds still are against any action this session ..... p. 128

NEW LOOK FOR INQUIRY BOARDS. Administration will skip over some of the regulars ..... p. 130

Labor Briefs ..... p. 130

## MANAGEMENT:

FLYING SOLO NOW. Chance Vought moves out of United Aircraft, becomes an independent ..... p. 100

BACK IN CLASS: Two groups of executives have another fling at learning ..... p. 108

Management Briefs ..... p. 110

GENERAL MOTORS STRUTS ITS STUFF (cover). New models, long lines waiting to get a look at them ..... p. 29

FOR THE 1954 MODELS, EYE APPEAL AND STYLE. How the cars stack up ..... p. 30

SEAWAY on the St. Lawrence: a reality at last ..... p. 32

Business Briefs ..... p. 34

## MARKETING:

SOFT DRINKS: WILL THE CANS TAKE OVER? It could mean the end of the regional bottler ..... p. 47

LOYALTY DOESN'T COUNT MUCH. When it comes to appliances, women are fickle ..... p. 50

MORE TV SALES MEETINGS. The closed-circuit idea is spreading ..... p. 54

Marketing Briefs ..... p. 56

## THE MARKETS:

WHEN BANKERS BUY STOCKS. These mutual savings banks are right proud of their record in the market ..... p. 124

## PRODUCTION:

TRANSISTORS: BIG PUSH COMING. Quality is better, now, for mass production ..... p. 58

NEW TRICK FOR MISSILES. With the honeycomb core, you get a stronger wing, a lighter one ..... p. 62

NEW TRICK FOR RECORDS. With injection molding, you get quality recordings, better production ..... p. 63

WHAT ARCHITECTS ARE COOKING. You will see these trends shape up in the years ahead ..... p. 66

FIGHT OVER ICE MELTERS ..... p. 70

SUPERIOR STEREO—3-D ..... p. 72

Production Briefs ..... p. 74

NEW PRODUCTS ..... p. 79

New Products Briefs ..... p. 82



## How air conditioning solved sugar-packing problem

### ... SIMPLIFIED TROUBLEsome PROCESSING OPERATION

**Bulk storage of sugar**, although desirable, had for many years proved impractical for Godchaux Sugars, Inc., New Orleans, La. Over 300 days a year the relative humidity reached 60% . . . sometimes even 90%. As bulk sugar readily absorbs moisture in this humidity range, it quickly lumps or cakes up. Therefore, sugar had to be packed right after processing. This caused a rush in both production and packaging departments (the latter pictured above) during the heavy demand season in contrast to relatively intermittent operations during low-demand periods. Different sugar types could not be packed according to definite orders; instead, advance estimates had to be made . . . a far from satisfactory method.

To further complicate matters, unavoidable sugar dust in the air was often turned by dampness into a syrupy film that hampered packaging, damaged machinery, irritated personnel.

**Engineers solved the problem** by constructing three air conditioned silos for storing bulk sugar. Each has a wooden lining 2" from the inside wall, permit-

ting circulation of air necessary for proper temperature and humidity. Now sugar is stored after processing, and is withdrawn as needed for packaging. Orders are filled exactly as required. Maintenance costs are down . . . morale is up!

**For the best air conditioning job**, Godchaux installed two 50-ton compressors to maintain temperature at 85°F. and relative humidity at 36%. These are operated with Du Pont "Freon"\*\* fluorinated hydrocarbon refrigerants . . . ideal for the purpose because they are safe, nonflammable, nonexplosive, virtually nontoxic. These refrigerants are made in strict accordance with intricate, laboratory-controlled procedures that insure quality and uniformity . . . factors important to the economical, satisfactory performance of the equipment over long periods of time.

**Today**, practically every line of business is making good use of air conditioning or refrigeration. Both are contributing in no small measure to the betterment of production methods . . . the improvement of plant and office efficiency, and

to the increase of company profits. Why not discuss the subject with your own engineers—now? Possibly there are many new applications that might well reduce time and costs within your establishment.

A booklet: "How Air Conditioning and Refrigeration Benefit Industry" will be sent on request. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

**KINETIC**  
**FREON**  
REG. U.S. PAT. OFF.  
**SAFE REFRIGERANTS**

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon refrigerants.

**DU PONT**  
REG. U.S. PAT. OFF.  
BETTER THINGS FOR BETTER LIVING  
... THROUGH CHEMISTRY



Dudley J. Scholten, Vice President of Argus Cameras, explains why:

## He doesn't believe in negatives!

When dealers phone for more stock fast—because customers want Argus cameras now—Dudley Scholten doesn't believe in negatives. He won't say "No." He uses Air Express.

"Last December 23, for example," he will tell you, "a large Indianapolis camera shop ran out of Model 75's, called us in Ann Arbor headquarters.

"We got together half a gross by noon of December 24 and let Air Express take over from there. That night, the dealer phoned again to say 'Thanks!' The Air Express delivery had arrived early in the afternoon—and by closing time he had sold out the whole order!

"There's no doubt that the astounding growth of Argus owes much to this policy of reliable, fast distribution. Argus sales rose from a net of some 5-million dollars at the end of 1950 to about 19-million in 1953.

"We ship by Air Express to our outlets all over the country in weights from 4 to 30 pounds, often as much as 120 pounds. Air Express always comes through for us, and we have found that most of our shipments cost us less than with any other air service."

It pays to express yourself clearly. Say Air Express! Division of Railway Express Agency.



**Air Express**

GETS THERE FIRST via U.S. Scheduled Airlines

## High Hopes, Backstopped

● That's the Administration's view of 1954 business as revealed in the Economic Report this week.

● Eisenhower's advisers think nothing worse than an inventory adjustment is happening.

● But if real trouble shows up they see an arsenal of government weapons ready to fight it off.

This week President Eisenhower told Congress he thinks he's doing all that is needed to end the soft spots in business and to start the U.S. economy on a new cycle of growth—and why he thinks so.

He and his Council of Economic Advisers painted a picture of a big but light-footed government ready to throw an arsenal of economic weapons into action to halt any serious downturn.

His economic report—required by the Employment Act of 1946—wraps up in the greatest detail yet his Administration's concept of the relation between government and business. It rounds up what has been indicated piecemeal over the last year—that Eisenhower is solidly on the side of those who believe government must use its vast powers to help maintain employment.

● **Responsibility**—Though the President is not worried over 1954 as a possible recession year, he bore down hard on the long-range responsibility of government to keep the economy expanding. He argued that a stand-still economy will cause the same type of dangerous conflicts caused by a shrinking economy. He said the government's job was to help living standards rise—and added that the peace in Korea should make it possible to undertake a "sustained improvement."

But he made it clear that he and his economic advisers see 1954 as "a good year—so good that it will see a resumption of business growth."

The report describes the slackening that occurred in the last half of 1953 as an inventory adjustment, probably linked to cessation of fighting in Korea. It acknowledges that the "slight contraction" has caused unemployment in some localities—but puts its bets on a reversal of this trend before the year is out.

Along with this optimism, there is a good deal of sober looking ahead and repeated warnings that economists can't make flat predictions. After tabbing the 1953 downturn as an inventory readjustment, for example, the message warns, "There can be no assurance that the decline will not be extended to other categories of spending."

● **Critics**—The message is the Administration's answer to Democratic critics, who have been saying a serious recession is already starting, that Eisenhower's businessman-administrators are too complacent, and that something should be done immediately to bolster consumer demand.

These critics got some new ammunition of their own this week. Fifteen labor market areas that have been rated as having a balanced labor supply were moved into the labor surplus category by the Department of Labor. Detroit topped the list; included were areas ranging from Sacramento, Calif., to Wilmington, Del. Unemployment in these areas has risen to between 3% and 6% of the labor force—an amount described as moderate by the Labor Department. Unemployment went over the 6% mark in two other areas—Muskegon, Mich., and New Bedford, Mass.

### I. Props under Prosperity

To all this, Eisenhower's economic report has two broad replies:

● The underlying forces on the side of continued prosperity outweigh the temporary effects of the inventory cutbacks that businesses have been making.

● The recommendations he has already made to Congress—highlighted by tax revision and housing recommendations—are sufficient to give the economy all the push it needs toward renewed growth.

Eisenhower paid particular attention

to one claim of his Democratic critics—that personal income taxes should be reduced in order to beef up consumer demand. As a counter, the President emphasized that retail buying is holding up well—so well that he lists it as one of the brightest spots in the 1954 picture.

He plainly counts, too, on housing as a bolstering force this year. He argued that the vacancy rate in many areas is still behind what a "healthy competitive market" would call for.

● **Bold Steps**—The economic report requests no new legislative decisions. But it refers to "bold steps" already spelled out in the detailed series of messages that have poured out of the White House all this month. Eisenhower picked out for particular emphasis his tax revision ideas (BW-Jan.23'54,p25), his request for "modernizing" unemployment insurance, a broadened base for old age insurance benefits, and improved planning of public works.

Still stressing that 1954 does not appear to be a year for stronger action than this, the report nevertheless runs down an imposing list of weapons that could be used to halt a tailspin. These included:

● Credit control, operating through the Federal Reserve Board.

● Debt management.

● Authority for the President to liberalize government-insured mortgage terms.

● A flexible budget—which apparently means a deliberate policy of deficits in times of sharp economic contraction.

● Agricultural supports—though his recommendations here are for lower, not higher, levels, beginning in 1955.

● Changes in the tax structure.

● Public works.

In stout, military-man language, Eisenhower summed up for Congress: "We shall not hesitate to use any or all of these weapons as the situation may require."

● **Test**—Congress put Eisenhower's program and his analysis of the business situation to an immediate test. The Joint Committee on the Economic Report scheduled hearings the day after the message was sent to Congress. In the lead-off role was Dr. Arthur Burns, chairman of the Council of Economic Advisers, who prepared the technical material back of the President's message.

### II. Props under Housing

Some of the most cheerful talk in

the long and cheerful economic message is about housing. Eisenhower plainly is counting on a good year in construction as an essential part of his expansion program.

In a separate message, he asked Congress to enact legislation to support the building of 1-million new homes a year.

Eisenhower's ideas on new housing legislation coincide pretty closely with the recommendations his advisory committee made last month. Only on the President's proposal for revamping the Federal National Mortgage Assn.—the agency that buys government-backed mortgages from lenders—was there a marked departure from committee thinking.

On that ticklish problem, the President asked for a reorganized government agency that eventually would be privately owned and privately financed. But the new Fannie Mae would keep a pipeline open to the Treasury for funds to stimulate any part of the program that needed support—such as a proposed experiment to encourage new or rebuilt private housing for low-income families.

**Cheaper Mortgages**—This special program to produce homes for sale or rent to low-income families would be a partial offset of public housing. Long-term, low-down-payment mortgages would take care of some of the need.

In addition Eisenhower asked Congress to continue the public housing program at 35,000 new units a year.

Basically, the outlook for a sustained—or expanded—housing boom rests on Eisenhower's recommendations for broadening and liberalizing mortgage terms for government-insured mortgages. Even more fundamental is another request that would give greater effectiveness to those proposals: that Congress empower the President to adjust—within such limits as Congress might set—the interest rates, loan-to-value ratios, and maturities of all government-backed mortgages, both FHA and VA.

That power would assure flexibility in meeting market conditions to maintain the attractiveness of government-backed housing loans.

Eisenhower asked for these changes in FHA-insured mortgages:

- Raise mortgage ceilings to allow for increased costs of housing.

- Equalize mortgage terms for existing houses, putting older homes on the same basis as new houses.

- Increase the maximum repair and modernization loan from \$2,500 to \$3,000 and lengthen the term from three years to five.

- Authorize FHA insurance of loans to renovate homes in declining neighborhoods.

## The Big Defense Contractors

Some gained rank last year

Latest Standing (June '53)	These Companies	Received These Contracts Since Korea (Millions of Dollars)	Which Is This Percentage of All Defense Contracts	Standing 6 Months Earlier
1. <b>General Motors Corp.</b>	\$7,095.8	7.2%	1	
2. <b>Boeing Airplane Co.</b>	4,402.9	4.4	6	
3. <b>General Electric Co.</b>	3,459.2	3.6	2	
4. <b>Douglas Aircraft Co., Inc.</b>	2,867.8	2.9	5	
5. <b>United Aircraft Corp.</b>	2,816.4	2.8	3	
6. <b>Chrysler Corp.</b>	2,199.9	2.2	4	
7. <b>Lockheed Aircraft Corp.</b>	2,152.1	2.2	7	
8. <b>Consolidated Vultee Aircraft Corp.</b>	2,072.1	2.1	16	
9. <b>North American Aviation, Inc.</b>	1,931.6	2.0	9	
10. <b>Republic Aviation Corp.</b>	1,877.7	1.9	10	
11. <b>Curtiss-Wright Corp.</b>	1,746.2	1.7	11	
12. <b>Ford Motor Co.</b>	1,604.8	1.7	8	
13. <b>American Telephone and Tel.</b>	1,491.8	1.5	13	
14. <b>Westinghouse Electric Corp.</b>	1,348.2	1.3	14	
15. <b>Grumman Aircraft Engrg. Corp.</b>	1,043.6	1.1	15	
16. <b>Northrop Aircraft, Inc.</b>	999.0	1.0	19	
17. <b>Bendix Aviation Corp.</b>	940.5	1.0	18	
18. <b>Sperry Corporation</b>	925.4	0.9	17	
19. <b>Kaiser Motors, Inc.</b>	987.6	0.9	38	
20. <b>American Locomotive Co.</b>	812.8	0.8	12	
21. <b>McDonnell Aircraft Corp.</b>	679.7	0.7	25	
22. <b>Radio Corporation of America</b>	664.6	0.7	24	
23. <b>Martin (Glenn L.) Co.</b>	643.2	0.7	27	
24. <b>International Harvester Co.</b>	628.5	0.6	21	
25. <b>Hughes Tool Co.</b>	622.4	0.6	26	

BUSINESS WEEK

## Air Program Takes Lead

The Administration's defense strategy—the heavy and growing concentration on air weapons—stands out clearly in the table of top defense contractors (above) announced last week by the Defense Dept. The 10 names in color, showing the contractors that gained rank in the year covered, are all those of aircraft producers, or makers of aircraft accessories. It's the companies with little or no aircraft work that have given most ground.

The Defense Dept. list covers only the first few Eisenhower months, through June, 1953; but it clearly shows the Administration strategy: Spend less for ground weapons, put the savings into air. The table is comprehensive; the 25 companies have 46.5% of all defense contracts.

**Pattern**—The pattern of the new air strategy shows up in those that lost ground as well as those that gained. When one aircraft maker slid, it was because another pushed ahead.

Giant General Motors remains at the

top of the list. But Chrysler, though it added about \$50-million in defense work, slipped two places down. Kaiser Motors jumped dramatically, but only because it absorbed Willys-Overland, taking over its contracts. Ford and American Locomotive both have less defense work than a year ago—the cut in tanks hit the latter hard.

**Emphasis**—The added workload at Boeing and Consolidated Vultee shows just where added funds for air defense are going: long-range bombers, all-weather interceptors, guided missiles. Right now, Boeing is tooling up for production of the new B52 jet bomber, for use in place of the piston-driven B-36; and is up to its ears making B47s.

At Consolidated Vultee, you'll find the Air Force's biggest all-weather interceptor program going on. It's the only manufacturer with a go-ahead on the F102—the plane that's counted on to intercept enemy bombers. Add to that its Navy guided missile work and its experimental bomber program.

# Civil Rights: a Wary Approach

Afraid of stepping on political toes, the Administration is attacking racial problems quietly and cautiously.

Last week, Vice-President Nixon announced that racial segregation has been abolished at all U.S. Navy installations. The last two holdouts—at Norfolk, Va., and Charleston, S.C.—are now completely integrated. "White" and "Colored" signs have disappeared from drinking fountains. Restaurants and rest rooms are open to all, indiscriminately.

Nixon was undoubtedly happy to make his announcement, for it provides top-notch campaign material for Republican politicos. Nixon was equally happy to add that the effects were achieved "without any serious repercussions." The avoidance of repercussions is the key to the Administration's entire civil rights program—whether it's concerned with Navy bases, war plants, grade schools, or city buses.

• **Scale Model**—The Navy base anti-segregation policy could have been brought off by a single, dramatic blow—an official order, perhaps, abolishing racial discrimination on the spot. This, undoubtedly, would have reaped a harvest of raucous publicity. It might have swung many votes into the Republican column—but it would have swung many the other way, too; and it might easily have lost the Administration some of its needed friends in Congress.

Instead of taking that risk, officials attacked the Navy bases quietly and with utmost caution. They cut out instances of racial discrimination one by one, watching the effects of each move carefully before going on to the next.

That's how President Eisenhower's Administration is attacking the whole problem of civil rights. Like other administrations in the past, it knows that it can't close its ears to protests of racial inequality in the U.S. Eisenhower's government knows that the subject of civil rights is a hypersensitive one. Talk about it too loudly and act too bluntly, and you make as many political enemies as you make friends.

• **Check List**—By following this policy of quietness and caution, the Administration has managed to do a good deal of work in the field of civil rights without stirring up a hornet's nest. Here's some of the work done, and in progress:

• The President's Committee on Government Contracts, headed by Nixon, has brought the District of Columbia in line with a government rule that affects contractors doing federal work. The contractors can't discriminate in hiring, the rule says, on the basis of race, creed, color, or national origin.

to hurt anybody's feelings, the Republicans sometimes seem to work themselves into paradoxical situations. Thus, GOP leaders have helped New Jersey's Republican Sen. H. Alexander Smith stall off a hearing on a bill that would set up a new federal Fair Employment Practice Committee. The bill would forbid employers and unions to practice discrimination, and would allow the committee to bring penalties down on the heads of violators.

The bill was the work of Sen. Irving Ives, top Republican civil rights man in the Senate. At first glance, it might seem that in stalling off his bill, the GOP is contradicting itself—arguing with one of its own voices. Actually, the move suits the Administration's thinking to a T. According to Presidential assistant Maxwell Rabb, top civil rights expert at the White House, Eisenhower feels the FEPC bill would eventually be blocked in Congress anyhow—largely by Democratic congressmen from the South. To support it would only be to step on these legislators' toes—and Eisenhower wants their support behind his ideas on such other subjects as taxes and foreign aid.

Furthermore, White House thinking



**The Offer Said "Free Wheat Storage"**

Wheat-laden trucks poured into Maumee, Ohio (near Toledo) last week from farms scattered in three states. The Andersons, big-time operators in the grain business (BW-Jul. 4 '53, p53), had offered to store surplus wheat for nothing—until May 1—in their big Maumee elevators. The wheat

is put up by farmers against government price-support loans; the government will take title to most of it on the May 1 claims date. By storing it free until then, the Andersons get (1) goodwill from the farmers, and (2) handling and storage fees from the government after the claims date.

leans toward letting the states set their own rules on segregation. A federal law would contradict this policy.

• Drawbacks—While the Administration's wariness undoubtedly has some political advantages, it has some drawbacks, too. It has drawn scowls, for instance, from liberal elements of the Democratic Party. These elements criticize Eisenhower's cautious approach as a failure to take a moral stand.

Negro leaders are less critical, but still far from satisfied. They would like the Administration to support an FEPC law. They would also like Eisenhower and his men to be more straightforward in dealing with cases of discrimination—to react against discrimination more dramatically, without so much cool-headed figuring of the political odds. Partly because of the Administration's wary attitude, it looks unlikely that the Negro vote—as a bloc—will swing wholesale out of the Democratic column. It would take some real dramatics on the part of the Republicans to bring that about.

• Hurdles—Opponents of the policy of caution can point, too, to several instances in which the Administration has had to sit back and watch discrimination practices going on right under its nose. Eisenhower has made no headway, for instance, in persuading Capital Transit Co. to hire Negro motormen for its buses and streetcars. And in some of the big atomic energy plants in the South, hiring practices don't conform to the rules.

Ideally, the Committee on Government Contracts—a watchdog with no enforcement powers of its own—is supposed to pressure government agencies into enforcing the antisegregation rules in the contracts they let. The strongest action that can be taken against a violator is cancellation of the contract by the agency concerned. But there's hardly any possibility that the contracts committee can induce the Atomic Energy Commission to cancel its contracts in the South. The violations continue; the government, in this case, can only accept area practices.

The Defense Dept., meanwhile—as the biggest contract-letter in the government—is unhappy over the fact that its own agents are supposed to enforce antisegregation provisions. Their job is to seek the most favorable contract, Defense maintains; often, the anti-segregation requirement conflicts with the job. Defense would like the anti-discrimination work to be taken over by the Labor Dept.

Thus, no matter how wary its footsteps, the Administration hasn't been able to avoid tripping now and then. Republican leaders know the policy won't net them any big pot of votes; they hope, instead, that it will bring them a slow, long-term gain.

## CBS Color Again

Company gangs up with GE to announce new single-camera TV that is compatible, and cheaper than RCA's.

Two powers in the television industry ganged up this week to start what has the makings of another loud squabble over color. Columbia Broadcasting System, Inc., and General Electric Co. announced jointly on Tuesday that they were teaming up on a single-camera system that, they say, will put color televising within reach of the small station. Their target, of course, is Radio Corp. of America and its three-camera color system (BW-Jan. 16'54, p100).

With the CBS-GE setup, one camera does the job—any black-and-white camera will do. The single camera is adapted to color by adding a new device called the Chromacoder and the old CBS field sequential color wheel—which was first approved and then rejected by the FCC. The Chromacoder takes the incompatible color signals as they come out of the CBS camera and converts them into the FCC-approved type of signal for transmission. In short, the Chromacoder makes the CBS color wheel compatible, so that its signals can be received in black and white on a standard TV set.

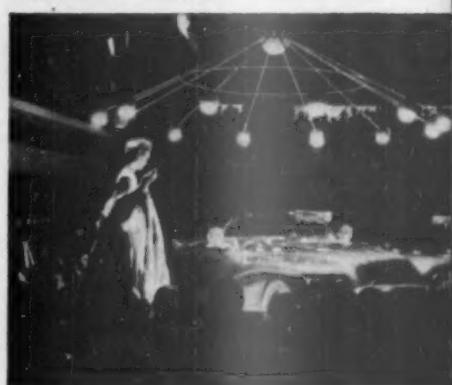
• Modification—Dr. Peter C. Goldmark, CBS laboratory head, says the big advantage of this new system is cost. "If a station is now operating with an RCA black-and-white camera, it can use the same camera for color telecasting with relatively low-cost modification. It won't cost the station as much to make the switch as it would to use the RCA system. And after it has made its switch to color, there are still more savings because maintenance costs are low. In the RCA system, you need three color tubes that cost about \$1,900 each. In ours, you need one that costs \$1,200. It's cheaper because it's an ordinary black-and-white tube."

The battle will probably move onto the studio floor in about six months. GE, which will manufacture the Chromacoder equipment under CBS license, expects to have a few cameras ready by Mar. 1, more by midyear.

• Rounding Out—GE has been itching to get into color-camera manufacture for some time, saw its chance when CBS let it be known that it had a camera with commercial possibilities. To both companies, the team-up has advantages. GE rounds out its line, has a stronger package to show the television station. CBS gets a manufacturer who can produce in quantity.



Crowds stood in line . . .



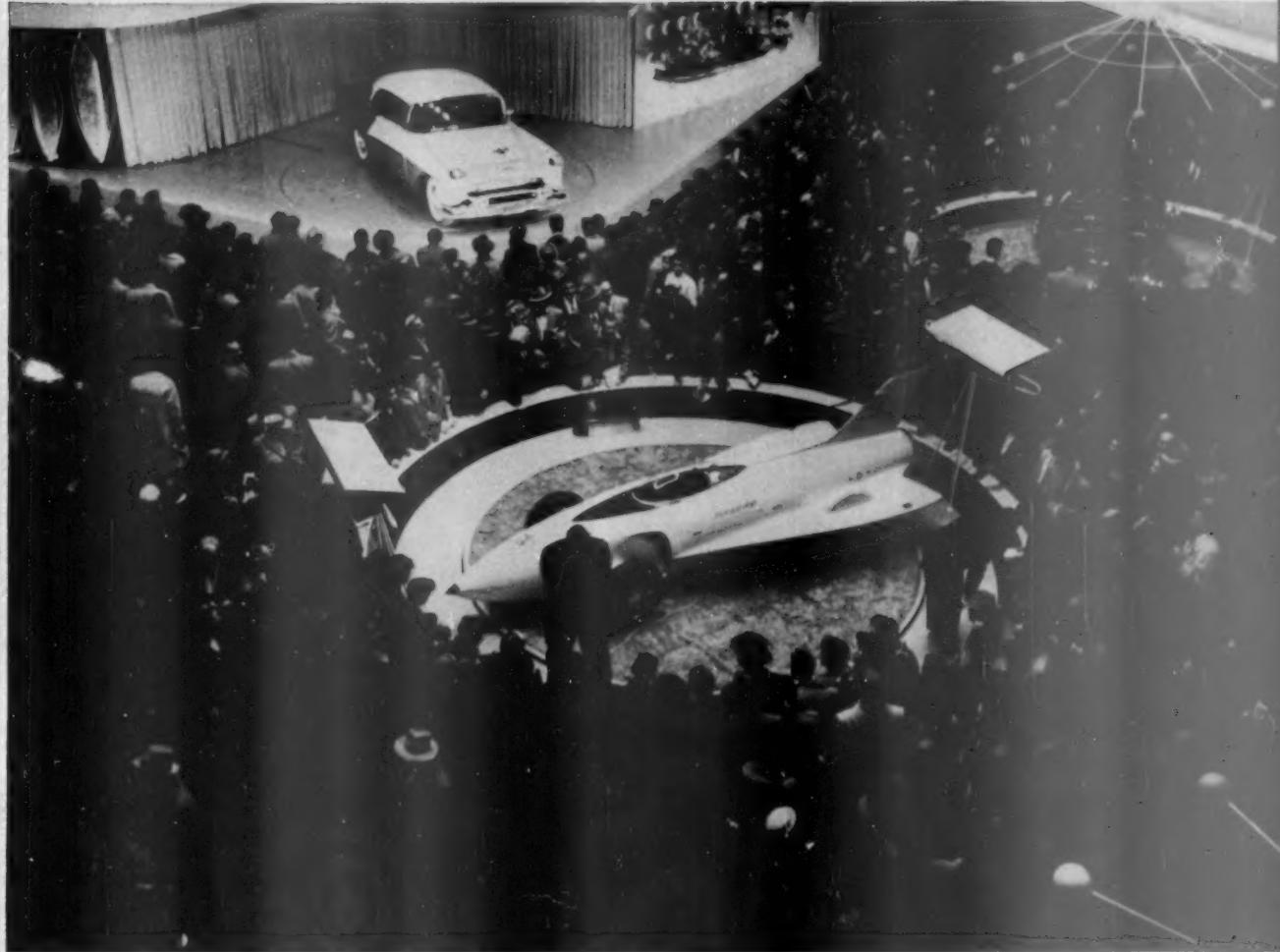
. . . to see new designs . . .



. . . admired exteriors . . .



. . . also interiors . . .



MOTORAMA at New York showed swarms of people the 1954 sales pitch for new automobiles. The season starts when . . .

## General Motors Struts Its Stuff

Long lines outside the Grand Ballroom of the Waldorf-Astoria Hotel in New York City last week signaled the actual start of the 1954 automobile selling season. Inside, the new cars of only one company were on display. But that company was General Motors, the only one offering a car for every size pocketbook.

Every other auto maker sells against at least one GM model. Until the competing motor makers—and the public—knew what GM had for this year, the real sales push couldn't get under way. Before GM opened the doors to its million-dollar Motorama, the 1954 Chevrolet and Pontiac were a month old, and Buick had been on sale for two weeks. But GM's Oldsmobile and Cadillac made their bows at the show.

The Motorama—which next week moves on to Miami and then to the West Coast—indicated not only the

shape of GM's competitive line for this year, but possibly for years to come. Each of the five GM divisions had two experimental "cars of tomorrow" on display—plus the gas turbine XP-21.

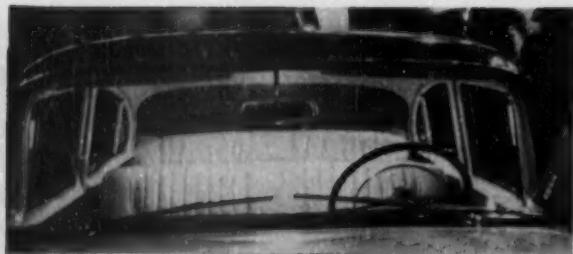
• **Triple Threat.**—The immediate worry of GM's competitors are the models in production now—particularly Buick, Oldsmobile, and Cadillac, the only 1954 cars with completely new bodies. For these three, plus slighter changes in Chevrolet and Pontiac, president Harlow Curtice said GM spent about \$350-million. The display of these cars signaled GM's kickoff to a renewed drive to capture 48% of the total new-car market. Last year GM missed its goal, winding up with about 45.6%.

• **Optimistic.**—If GM hits its 48% target this year—and last week Ward's Automotive Reports estimated GM January production at 47% of the industry—it may still have to settle for less

output than in 1953. In his annual market forecast at the Motorama, Curtice said that approximately 6.3-million cars and trucks will be built this year. Depending on the truck market, that's somewhere between 5.3-million and 5.5-million cars. In 1953, GM turned out 2,799,615 cars; 48% of the low side of the 1954 estimate would be about 2.5-million cars.

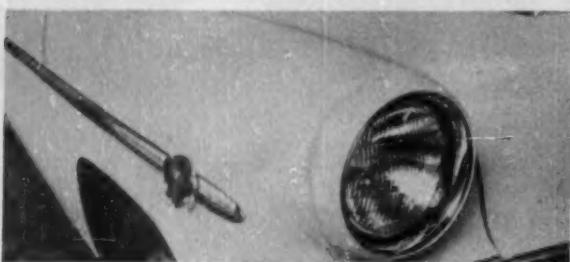
Despite current indications of a sales downturn, Curtice was optimistic. The billion-dollar expansion announced for the next two years (BW-Jan.23'54, p17) means a 20% increase in capacity of each of the five car divisions. That alone signals rough weather ahead for GM's competitors.

But none of them, particularly Ford, is throwing in the towel. Once again, each has a new model to ballyhoo. For the chief talking points of the 1954 cars, turn the page.



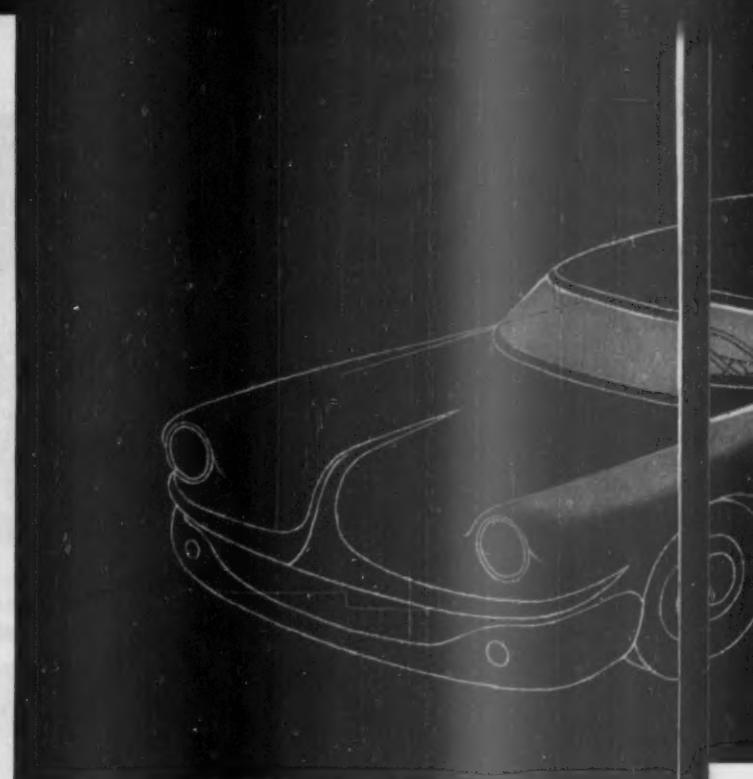
### WINDSHIELD

The wrap-around windshield, shown here on Buick, is also a feature of Oldsmobile and Cadillac. By next year, it's expected to be almost universal.



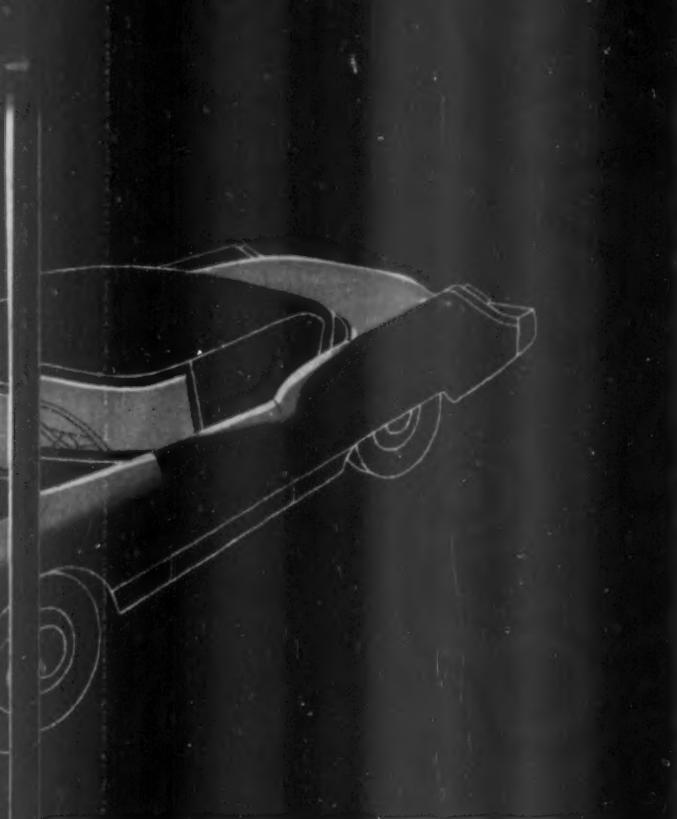
### FRONT FENDER

boosted to the level of the hood is shown here on Mercury. Packard has had it for years; it also appears on Ford.



## For the 1954 Models,

\$1,600—\$2,800										
MODEL	CHEVROLET	FORD 6	PLYMOUTH	FORD 8	STUDEBAKER CHAMPION	HUDSON JET	WILLYS LARK	WILLYS ACE	PONTIAC 6	DODGE 6
<b>PRICE RANGE</b> (Sedan Delivered at Factory)	\$1,680— \$1,880	\$1,700— \$1,900	\$1,760— \$1,950	\$1,780— \$1,970	\$1,800— \$2,000	\$1,860— \$2,000	Price not Available	Price not Available	\$2,000— \$2,130	\$2,000— \$2,130
<b>ENGINE</b> Horsepower	125— up 10	115— up 14	100— (no change)	130— up 20	100— up 15	114— up 10	90— up 15	115— up 23	118— up 3	110— up 7
Compression Ratio	7.5:1 (was 7.1)	7.2:1 (was 7.0)	7.1:1 (no change)	7.2:1 (no change)	7.5:1 (was 7.0)	7.5:1 (no change)	7.6:1 (was 6.9)	7.3:1 (no change)	7.7:1 (was 7.0)	7.25:1 (was 7.0)
<b>EXTRAS</b> (Price)	Automatic Transmission	\$178	\$184	\$145 (semi-auto.)	\$184	\$216	\$178	No price set	\$178	\$189
	Power Steering	\$134	\$134	\$139	\$134	\$160		No price set	\$134	\$177
	Power Brakes	No price set	\$40		\$40				\$49	\$36
	Air Conditioning		No price set		No price set	No price set			\$594	
\$3,400—\$3,800										
MODEL	NASH AMBASSADOR	HUDSON SUPER WASP	OLDSMOBILE SUPER 88 & 98	BUICK CENTURY	CHRYSLER WINDSOR	DE SOTO 8	BUICK SUPER	HUDSON HORNET	PACKARD CLIPPER	
<b>PRICE RANGE</b> (Sedan Delivered at Factory)	\$2,410— \$2,590	\$2,460	\$2,480— \$2,800	\$2,520	\$2,560	\$2,670	\$2,710	\$2,770	\$2,690— \$2,800	
<b>ENGINE</b> Horsepower	130— up 10	140— up 13	185— up 20	200 (new model)	119— (no change)	170— up 10	100— up 18	160— up 15	165— up 5	
Compression Ratio	7.6:1 (was 7.3)	7.0:1 (was 6.7)	8.25:1 (was 8.1)	8.5:1 (new model)	7.0:1 (no change)	7.5:1 (was 7.1)	8.5:1 (was 8.0)	7.5:1 (was 7.2)	8.0:1 (no change)	
<b>EXTRAS</b> (Price)	Automatic Transmission	\$178	\$178	\$178	\$192	\$189	\$192	\$178	\$199	
	Power Steering	\$149	\$177	\$134	\$134	\$177	\$134	\$177	\$177	
	Power Brakes	\$39	\$42.80	\$49	\$49	\$36	\$49	\$42	\$43	
	Air Conditioning	No price set		\$594	\$596	\$642	\$594		\$647	



**REAR DECK** flattened out is modeled here on the Packard Clipper. Pioneer by Packard, it has been taken up by the GM line and the Lincoln in modified form.



**FENDER BREAK** emphasizing the now-integrated rear fender is a feature of Oldsmobile (above), Buick, Cadillac. GM uses most style innovations.

## Eye Appeal and Style (Story continues on page 32)

\$2,000 — \$4,400

NASH RAMBLER	PONTIAC 8	DODGE 8	STUDEBAKER COMMANDER & LAND CRUISER	NASH STATESMAN	MERCURY	BUICK SPECIAL	HUDSON WASP	OLDSMOBILE 88	DE SOTO 6	KAISER SPECIAL	KAISER MANHATTAN
\$2,000 — \$2,180	\$2,100 — \$2,300	\$2,170 — \$2,370	\$2,180 — \$2,400	\$2,180 — \$2,360	\$2,250 — \$2,330	\$2,260	\$2,260	\$2,330	\$2,380	Price not Available	Price not Available
90— up 5	127— up 9	140 & 150 up 10	120 (no change)	110— up 10	161— up 36	150— up 25	126— up 14	170— up 20	116 (no change)	118 (no change)	140— up 22
7.3:1 (was 7.25)	7.7:1 (was 6.8)	7.5:1 (was 7.1)	7.6:1 (was 7.0)	8.5:1 (was 7.45)	7.5:1 (was 7.2)	8.1:1 (was 7.0)	7.0:1 (was 6.7)	8.25:1 (was 8.1)	7.0:1 (no change)	7.3:1 (no change)	7.3:1 (no change)
\$178	\$178	\$189	\$226	\$178	\$189	\$192	\$178	\$178	\$189	No price set	No price set
	\$134	\$177	\$160	\$139	\$144	\$134	\$177	\$134	\$177	No price set	No price set
	\$49	\$36		\$39	\$41	\$49	\$42	\$49	\$36	No price set	No price set
	\$594	\$642	No price set	No price set	No price set	\$594		\$594	\$642		

\$2,800 — \$3,800

Over \$3,800

BUICK ROADMASTER	CHRYSLER NEW YORKER	PACKARD CAVALIER	LINCOLN	PACKARD PATRICIAN	CADILLAC	CHRYSLER IMPERIAL
\$3,270	\$3,230 —	\$3,340	\$3,520 — \$3,710	\$3,890	\$3,930 — \$4,650	\$4,260
200— up 12	195 & 205 up 15 & 55	185— up 5	205 (no change)	215— up 32	210— up 20	235— up 35
8.5:1 (no change)	7.5:1 (no change)	8.0:1 (no change)	8.0:1 (no change)	8.7:1 (was 8.0)	8.25:1 (no change)	7.5:1 (no change)
Included in price of car	Included in price of car	\$199	Included in price of car			
Included in price of car	\$177	\$177	\$155	\$177	Included in price of car	Included in price of car
\$49	Included in price of car	\$43	\$43	\$43	\$47	Included in price of car
\$594	\$642	\$647	No price set	\$647	\$620	\$642

## Auto Models

(Story starts on page 30)

"The customer doesn't buy for quality any more," said the sales manager of one of the Big Three auto divisions in an unguarded moment. "He buys for looks."

Whether or not all auto executives would be as frank, their 1954 models indicate substantial agreement. Style's the thing. Brand-new mechanical features are few, led by completely new engines in the Ford and Mercury. There have been changes in front end suspension, engineering refinements.

• **More Horses**—Horsepower is still going up, along with compression ratios (see chart), in the face of repeated and long disclaimers by industry engineers that there is any "horsepower race." You get better acceleration, say the engineers, with higher horsepower; this makes it safer for you to pass. You also get better hill-climbing performance.

Higher-octane fuels give more power, but you need higher compression to take best advantage of these fuels. The fuels cost more, but with a higher horsepower engine, you now can cruise more economically at, say, 40 mph. than you could a few years ago at 30 mph. What isn't talked about so loudly is that you need more horsepower with an automatic transmission and for some optional equipment, such as air conditioning.

• **Prices Static**—Prices of the 1954 models are in the same general range as in 1953.

The prices on the chart are the cost at the factory, including federal taxes and dealer handling charges (generally \$10 to \$25) for four-door sedans without radio, heaters, or other extra equipment. Hardtops, convertibles, station wagons, and other special models run several hundred dollars higher. Radio and heater will run about \$150 total.

To get a better idea of what a 1954 car would cost you, use the price range in the chart and add transportation costs and state and local taxes. Transportation charges vary greatly according to area, weight, and whether the car moves by rail, water, or truck. Close to the factory, cost may be as little as \$20. It also can range up to \$200.

• **Eye Appeal**—Generally speaking, car salesmen in 1954 won't try to sell you on what's under the hood or what a bargain you're getting. Most likely the salesman will tell you what a beauty it is. For the notable changes over 1953 models are for eye appeal, led by the completely new body designs of the Buick, Oldsmobile, and Cadillac.

The drawing shows the four main features of 1954 style, and what likely

will be the style for some time ahead: high front fenders on the same level as the engine hood; longer, lower appearance, achieved by a gentle downward sweep of the door line (called "belt line") from front to back—necessitating in the case of Buick, Olds, and Cadillac an upsweppt line to the rear fender; a flattened rear deck trunk cover; integral rear fenders.

Perhaps the most striking change in 1954 styling is the "wrap-around" windshield of the Buick (cover), Olds, and Cadillac. This is designed to give the driver greater visibility and cut down even more the size of the front door post. This is almost certain to be a feature in all future cars. It's not a new idea; an engineer of an independent company remarks somewhat resignedly that he had it planned for 1951 models, "but we can't afford to be first with something as radical as that."

• **Need for Volume**—What he means is this: The wrap-around windshield is expensive—if an independent did it first, it probably would increase the price of the car. GM's volume will bring the price down to acceptable limits for all by the time other car manufacturers are ready to use the wrap-around.

That's why 1955 cars of all manufacturers most likely will trend toward the 1954 Buick, Olds, and Cadillac styling. With the exception of the windshield, few of the features are brand-new. Packard, for one, has used the flattened rear deck and high front fenders for several years. But the GM line is the first to incorporate all the features other manufacturers have used piecemeal from time to time.

There's a dark horse in the styling race: the transparent roof section in some hardtop models of Ford and Mercury. Ford is being careful and is programming only about 25,000 of these in its entire million-plus output, but it's the kind of gimmick that could set a new style trend.

• **More Extras**—Another trend in 1954 cars is the availability of more extras. You can get electric window lifts, for instance, in a Ford (for about \$100). Pontiac claims a front seat with 360 different positions (for about \$40). For the first time the Chrysler line—except Plymouth—offers a fully automatic transmission. No low- or medium-price car this year is offering an automatic transmission as standard equipment, but the price of the feature, as well as of power steering and power brakes, has been reduced.

Inside you can get seat coverings in nearly any color and material, "harmonized" with exterior colors. Synthetic fibers have almost completely replaced fabric—and with their claims of being washable and nearly wear-proof put a big question mark over the future of the seat-cover business.

## Seaway . . .

... along the St. Lawrence, dreamed of for 20 years, seems about to become a reality at last.

Once again, the 20-year dream of a St. Lawrence Seaway shows signs of coming true. The Administration has endorsed the project as a thoroughly useful one for defense purposes. Last week, the Senate passed a measure that would let the U.S. cooperate with Canada on the seaway. Now, the dream is in the hands of the House.

Its chances there are neither exceptionally good nor exceptionally bad. It will probably get a friendly reception in the Public Works Committee, which is headed by one of the seaway's most active cheerleaders in the House—Republican Rep. George A. Dondero of Michigan. But it may run into trouble in the powerful Rules Committee, chairman of which is Republican Rep. Leo E. Allen. Allen comes from Illinois, where railroad interests are strongly opposed to the seaway. His committee, if it chooses, can refuse to let the bill go to the House floor.

The bill will also have to contend with Speaker Joseph W. Martin, Jr. Atlantic port cities stand to lose business if the seaway is built, and Martin comes from Massachusetts. Martin is unlikely to help the bill reach the floor, and he's unlikely to give it more than lukewarm support if it does.

• **The Dream**—The bill may die in Congress, as similar bills have done many times before. But from the point of view of its proponents—particularly Canadians—the dream is too good to abandon. It envisions a waterway that will let seagoing ships sail clear from the Atlantic Ocean to the Great Lakes, in the heart of the North American continent.

• **Power**—Closely related to the idea of a seaway is the idea of a joint U.S.-Canadian hydroelectric power project on the St. Lawrence.

The power project is half a step closer to reality than the seaway. Last summer the Federal Power Commission granted permission to the New York State Power Authority to build the U.S. portion of the power installation. Previously, the federal government had toyed with the idea of working on the power project itself. With FPC's move last summer, Washington dropped out of the act.

But private interests didn't. Private power men contested FPC's action, and the case is now being fought in U.S. circuit court. A decision is expected any week.

# STEEL

**when you  
need it**



● Noon or midnight the loading area of this Ryerson plant looks much the same because we work 'round the clock to make sure that you get Ryerson Steel when you need it. Carbon steel, alloy steel, stainless—every kind is on hand, in practically every shape and size. Your requirements can be set down where you want them, quickly, cut to size and ready for immediate use. Just call the nearest Ryerson plant.

PLANTS AT: NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE, N. C.  
CINCINNATI • CLEVELAND • DETROIT • PITTSBURGH • BUFFALO • CHICAGO  
MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE

# RYERSON

## BUSINESS BRIEFS

# Is high productivity the key to your company's leadership?

Do you depend on the modernity of your manufacturing equipment to enable you to meet competition and make a profit?

Is it true in your business that an average age of over five years in the age of production equipment is a danger signal?

Of all the *New Britain Machines for Making Progress*, none is more widely used by industrial leaders to modernize production standards than New Britain's line of precision Boring and Turning machines.

These relatively small, very fast, completely automatic machines are adaptable to the mass production of an almost unlimited variety of contoured metal turning and boring work.

They combine just about everything production engineers look for in modern equipment — adaptability, ease of tooling, economy of operating personnel, simplicity, absolute accuracy, ability to positively repeat from piece to piece, and elimination of finishing operations.

In many plants which are a by-word for production efficiency, New Britain Boring machines have proved a logical first step toward improving over-all productivity.

May we mail you "24 COST CUTTING JOBS" which should suggest some of the many possibilities of these machines in your plant?

### *Machines For Making Progress . . .*

AUTOMATIC BAR AND CHUCKING MACHINES

PRECISION BORING MACHINES

LUCAS HORIZONTAL BORING, DRILLING AND MILLING MACHINES  
NEW BRITAIN +GF+ COPYING LATHES

# NEW BRITAIN

*Automatics*

THE NEW BRITAIN MACHINE COMPANY  
New Britain-Gridley Machine Division  
NEW BRITAIN, CONNECTICUT

**Coffee probe:** The Federal Trade Commission is investigating possibilities of monopolistic practice as a cause of skyrocketing coffee prices (BW-Jan.16'54, p72). President Eisenhower said the probe would give particular attention to futures trading. Meanwhile, there is talk in Congress of putting coffee trading under the Commodity Exchange Authority. And South American growers are setting up junkets to convince customers that the soaring prices aren't their fault.

**Hotter gasoline race** (BW-Jan.16'54, p30) got a new entry when Atlantic Refining Co. gave advance notice of a new fuel claiming "appreciably higher" octane rating than its competitors. Still unnamed, the fuel is expected on the market very soon. Atlantic is producing the new gas by an expensive catalytic process based on platinum, instead of by the usual additives.

**Batteries fueled** by radioactive material and capable of delivering small quantities of electricity continuously for decades may come out of RCA research on transistors. Radioactive energy always shows up as a small flow of very high-voltage particles. The RCA device utilizes a newly discovered ability of transistors to step this energy down to a usable flow of low-voltage current. As yet, only about 1% of the energy released can be captured.

**Antitrust charges:** The Federal Trade Commission has leveled monopoly charges against Luria Bros. & Co. and a subsidiary in the selling of scrap steel. Hearing will begin in April on the charges, which also name U.S. Steel and 15 other steel companies. . . . The Justice Dept. has filed price-fixing charges against the big four of the U.S. pencil industry—American Lead Pencil Co., Joseph Dixon Crucible Co., Eagle Pencil Co., and Eberhard Faber Pencil Co.

**A business loans pool** is the RFC's new device for getting banks to buy up its \$100-million in loans to small concerns. In effect, the RFC would bake all its multitude of little loans into one pie, and sell slices of the pie to individual banks.

**Machine tool orders** picked up moderately in January after a November-December slump, the industry reports. Orders are said to be running 10% to 25% ahead of the "abnormally low" levels of late 1953.

# Do you want a new typewriter for a penny a day?



*That is the cost per machine  
when you trade in at 5 years instead of 10  
for NEW ROYAL STANDARDS!*



**New Royal Standards will give you**

- ... increased typing production, cleaner-looking, better-groomed letters, memos and reports.
- ... higher office morale and better employee relations—intangibles that are hard to define but mighty apparent when missing.

**From new Royal Standards you will get**

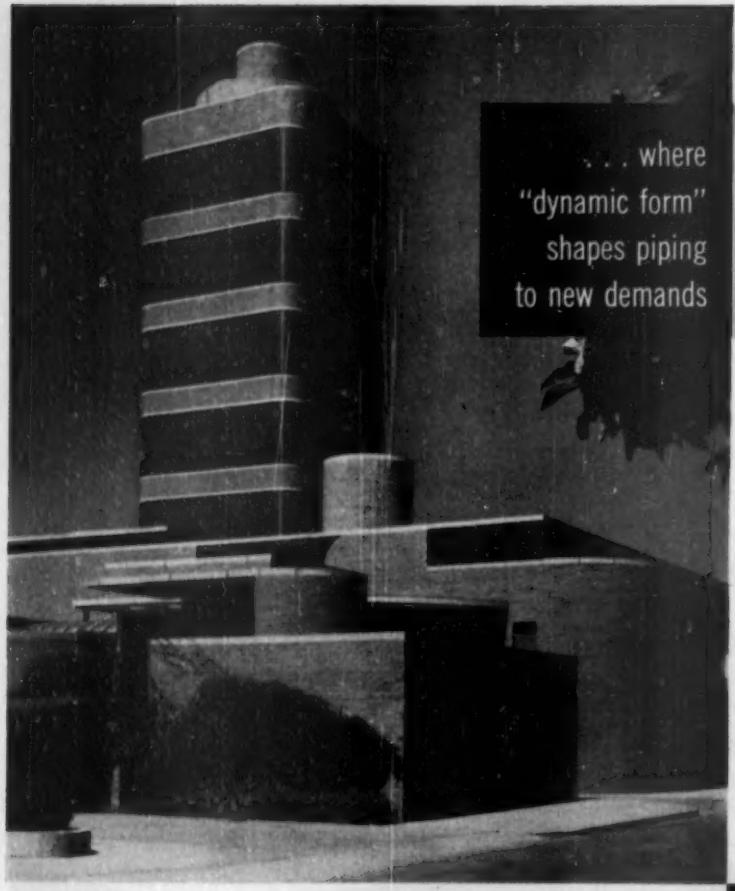
- ... the finest, most rugged precision writing machines built. They take less time out for repairs, too.
- ... the typewriters preferred 2½ to 1 by people who type.

**With no obligation** you can have a Royal Representative bring a new Royal to your office and show you how it works . . . explain to you the details of the 1-cent-a-day story.

CALL YOUR ROYAL REPRESENTATIVE

{ He's listed in the  
Classified Telephone  
Directory

**ROYAL®**



... where  
"dynamic form"  
shapes piping  
to new demands

The efficient use of space to provide open, well-lighted working areas in modern industrial structures necessitates careful planning of various plant service lines. In the world-famed Johnson's "Heliolab", for example, all piping and duct systems are standardized vertically in a single central shaft measuring 13 feet in diameter. Thus, pipelines serving plumbing and heating, air-conditioning, and all apparatus supply needs are confined to a minimum of space. Direct takeoffs at each of the 14 operating floors eliminate the complex hookups usually found in laboratory buildings. More than 1700 valves are used in tower service lines.

To assure trouble-free operation of such unique and closely coordinated facilities, all components were selected on the basis of proved dependability, safety, and long-range maintenance economy. Johnson's Wax engineers had first hand evidence of the high rating of Jenkins Valves from previous installations in plant and office buildings.

This confidence in the demonstrated *extra measure* of efficiency and economy provided by Jenkins Valves is shared by plant operating managements in every type of industry.

Despite this extra value, *you pay no more* for Jenkins Valves. For new installations, for all replacements, let the Jenkins Diamond be your guide to lasting valve economy. Jenkins Bros., 100 Park Ave., New York 17.

## JOHNSON'S WAX adds new evidence to the efficiency record of Jenkins Valves

### JOHNSON WAX TOWER

*Architect:* FRANK LLOYD WRIGHT

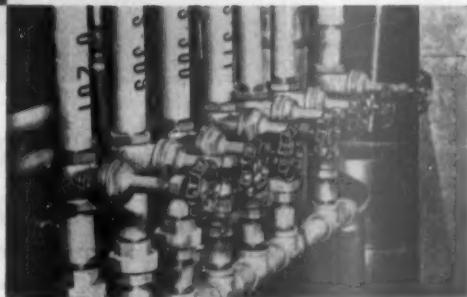
*General Contractors:* WILTSIECK AND NELSON, INC.

*Consulting Mechanical Engineers:*

SAMUEL R. LEWIS & ASSOCIATES

*Piping Contractor:* JOHN FRINGER PLUMBING COMPANY

Symbolic of the advanced design principles that guided the building of the Johnson's Wax Administration and Research Center at Racine, Wisconsin, is the world-famed core-supported Research and Development Tower. Designed by Frank Lloyd Wright, this modern, 14-story laboratory provides every facility known to science for the continuous development and improvement of Johnson's Wax products.



For a new addition to the wax manufacturing building, most recent enlargement of the Johnson's Wax plant, Jenkins Valves were again chosen. Above they are shown in a process piping hookup which supplies raw materials to a series of mixing kettles. Piping contractor for the new addition was Advance Heating Company, Racine, Wis.

JENKINS  
LOOK FOR THE DIAMOND MARK  
VALVES



*Sold through Leading Industrial Distributors: Everywhere*

# WASHINGTON OUTLOOK

WASHINGTON  
BUREAU  
JAN. 30, 1954



Political maneuvering against Eisenhower is showing up in Congress. Although the session still is less than a month old, you can begin to see where the Democrats will make their major attacks. The big plum this year is House and Senate control, which the voters will award, come November. The opposition to the Administration is building its hopes on the issue of GOP favoritism for business at the expense of the farmers and workers.

Taxes are a good example of how the wind is blowing. Who gets the cuts will be built into a big issue for the fall campaigning.

Eisenhower's revisions lean toward business, on the assumption that if the profit incentive is there, business will lay out the capital and make jobs for a rising working force, and pay good wages.

But the Democrats aren't buying this. They are building up a record to show that they would give a larger share of the \$1.5-billion of cuts to individuals—voters—and to more people than Eisenhower proposed.

Note the vote on personal exemptions. The House Ways & Means Committee is working behind closed doors. But decisions get out.

Eisenhower wants to keep the \$600 personal exemption. The reasoning is that it's good to keep the tax base broad. Then some 50-million taxpayers are aware of government costs.

The Democrats want an increase. They proposed it in the committee, and lost on a straight party vote, 15-to-10.

But it's still an issue. The real showdown will come on the House floor, when members must answer the roll call—go on record. In an election year, with the House so closely divided, the Democrats might upset the GOP.

The same issue is being raised on working mothers. Eisenhower would give an extra allowance for the care of small children where the widow, or widower, must work. The Democrats made an unsuccessful try in committee to extend this to all working mothers. They will try it again on the floor. It's the popular idea—hard, politically, to stand up against.

Then there's the relief from the double tax on dividends. Corporate profits now are taxed as income to the company, 52%, then dividends paid out of profits after taxes are taxed as income to shareholders.

Eisenhower would give dividend receivers a tax credit, starting now. The credit would increase later, with the result that three years hence, stockholders would be relieved of \$1-billion in taxes.

The Democrats are picturing this as favoritism for the capitalists—a cut for investment income, unearned income, as against money worked for in office and factory jobs. Watch for a move to revive the old earned income credit—exemption for part of wages and salaries.

Eisenhower's really big tax revision—on depreciation—will be fired on, too. The theory behind it is that business will invest much more freely if the chances of recovering a capital outlay, free of taxes, are made better. His idea is to permit a faster tax write-off than is allowed under present

# WASHINGTON OUTLOOK (Continued)

WASHINGTON  
BUREAU  
JAN. 30, 1954

rules, which make depreciation correspond to the estimated useful life of the asset. What he proposes is a stepped-up write-off in the early years of useful life.

Politics are showing up in the debt-ceiling issue, too. Eisenhower can get by under the present \$275-billion ceiling until after midyear. Then, his deficit will be knocking against the roof.

The ceiling will be raised ultimately. But it won't go up to the \$290-billion Eisenhower and Treasury Secretary Humphrey want. The line the Democrats are taking is this: The GOP promised to balance the budget. We get the blame for the high level of spending. If the budget were balanced, the debt ceiling wouldn't have to go up. So, we will only put it up a bit at a time. That way, if the Republicans don't make good on their promise of a balanced budget, we will keep the issue constantly alive—"two-bit them to death, with ceiling increases too small for their deficits."

Defeat of the Bricker amendment on treaty making will leave scars. Its most ardent Senate backers were Republicans of the extreme right wing. They resent Eisenhower's direct intervention, which cost them many votes. The compromise offered—a ban on treaties contravening the Constitution—didn't satisfy them. The threat now is to make trouble on other issues.

Note the new tariff powers proposed for the President in the report this week by the Randall Commission (page 118).

Cuts could be made unilaterally—without concessions to this country, as under the old Hull reciprocal doctrine. Reductions could go to a full 50% of the 1945 basic level on items that are not imported in substantial volume. And any tariffs now over 50% on an ad valorem basis could be cut back to that level.

But the Randall recommendations face tough going. There's support for the general idea of increasing foreign trade. But when it gets down to the specific issue of where tariffs are to be cut at the expense of domestic business, Congress will balk. The first reaction to the program is that Eisenhower will do well if he can get a simple extension of the old reciprocal trade agreement act, now in effect.

The renegotiation law will be continued, for at least another year.

Higher postal rates are getting strong backing from the Administration. Congress is reluctant in an election year, for a rate rise is nothing short of a higher tax on mail users. But it may be pushed into action.

Eisenhower is betting this will be a good business year. His report to Congress on the economic outlook (page 25) pictures the soft spots showing up in business as an inventory adjustment. It forecasts renewal of the growth trend in business, encouraged by his legislative program.

What if he is wrong? The promise is that the government will use every means at its command, if necessary, to maintain production and jobs. That would mean more spending, more tax cuts, easier credit to back up the tax and housing "incentives" now pending before Congress.

Copyright 1954 by McGraw-Hill, Inc. All rights reserved. This publication may not be reproduced, in whole or in part, without written permission of the publisher.

ELECTRICAL DEVELOPMENTS OF 1953

**WORLD'S LARGEST CIRCUIT BREAKER**, this 80-ton 330,000-volt unit for the highest-voltage transmission network guards the highest power concentration known.

## Another year of electrical progress opens new opportunities for American industry

**General Electric reports to business management on a few product developments and engineering achievement of 1953**

The developments pictured on the following pages will play a major part in raising America's living standards. They will help meet the accelerated growth of electric utilities—improve the productivity and products of factories, mines, farms—promote new transportation records of speed and

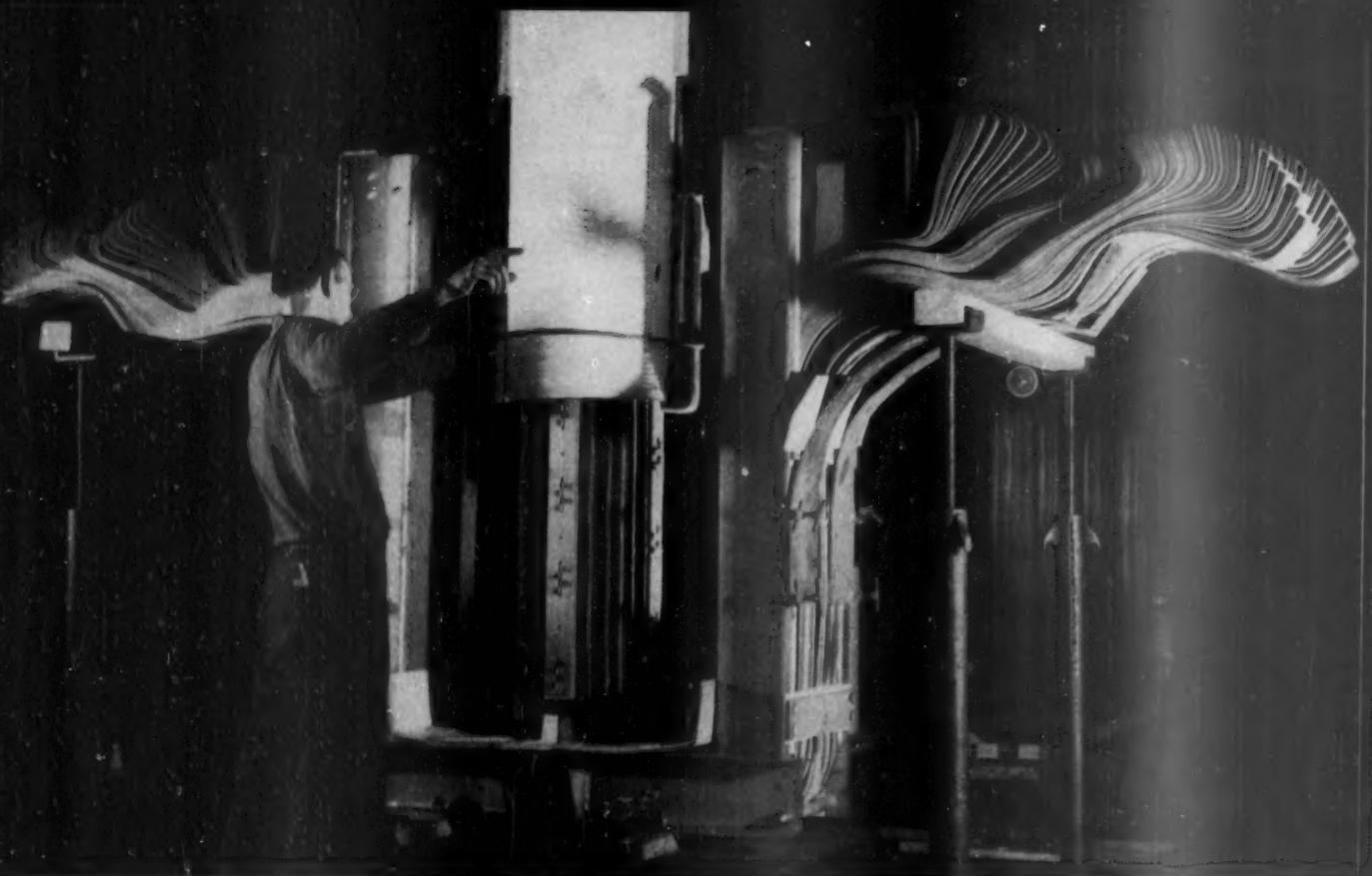
safety—or contribute to strengthening the nation's defense program.

As General Electric enters its second 75 years of electrical progress, we will provide you with even better service. We hope these developments will suggest to you possible applications in your own business.

775-3A

*Progress is our most important product*

**GENERAL**  **ELECTRIC**



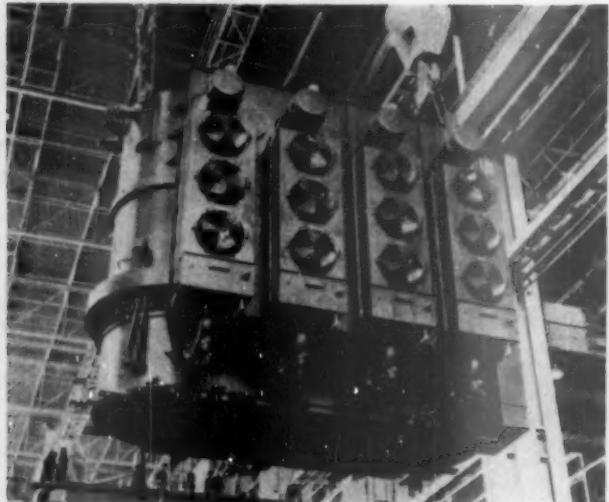
**NEW TRANSFORMER DESIGN FOR IMPROVED PERFORMANCE.** Reduced size and weight, improved performance, of all single-phase

G-E power transformers rated 500 kva and below is made possible by a new wound-core design using pre-formed, pre-cut cores.

## 1953 advances in G-E power equipment

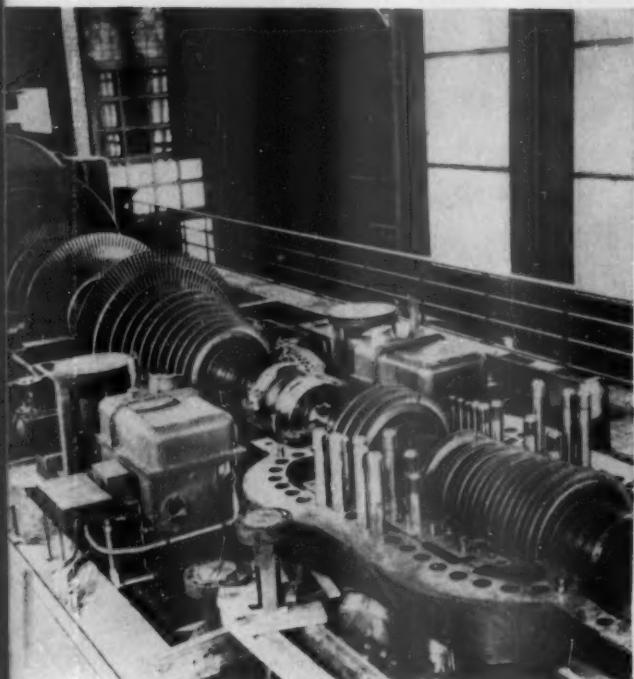


**OUT OF DARKNESS.** New fluorescent street-lighting luminaire gives glareless visibility; new street-lighting transformers offer more accurate regulation, faster response; two new vehicle-actuated traffic controllers automatically adjust signals to traffic flow.

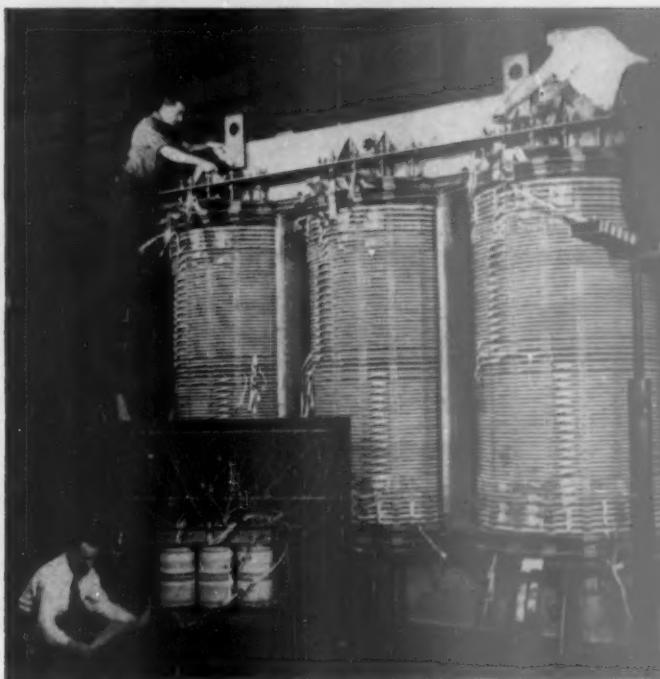


**GIANT POWER TRANSFORMERS SHIPPED.** Two 175,000-kva power transformers shipped in 1953 weighed 70,000 lb. less than similar units of half the rating shipped three years ago to same customer—dramatizing G-E progress in cutting transformer sizes and weights.

## ELECTRICAL DEVELOPMENTS OF 1953



**KEEPING ELECTRICITY YOUR BIGGEST BARGAIN.** Two 145,000-kw turbines, operating at initial steam temperature and pressure of 1100 F and 2350 psig, were installed. Use of higher temperatures and pressures has increased the kilowatt-hour output of coal by 66½ percent in the last 25 years.



**NEW HIGH IN POWER TRANSFORMER PERFORMANCE.** A new method, using electro-magnetic models for determining transient voltages in large power transformers during the design stage, makes possible more effective use of insulation materials and thus significant size and weight reductions, without reducing transformer reliability.

# cut generation and distribution costs

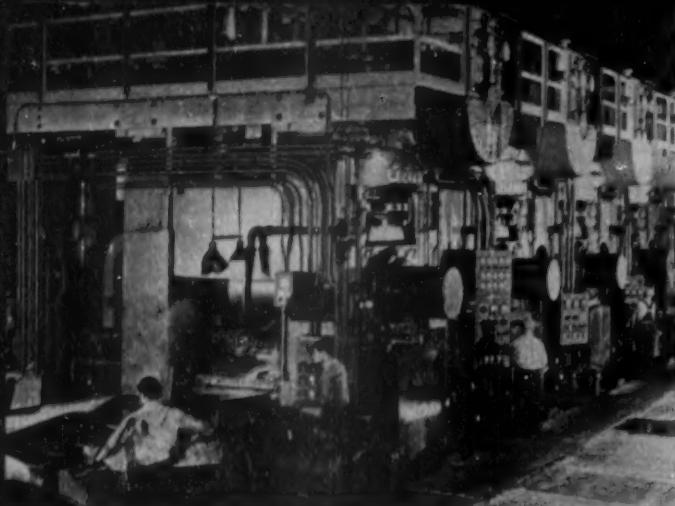
General Electric's first direct-cooled generator rotor was installed in a 100,000-kw turbine-generator at a large eastern power station. Much work at General Electric centers on methods of direct gas cooling of generator fields and gas and liquid cooling of armatures. These developments, by making possible greater output from the same frame sizes, will be a significant answer to the electric utility industry's demands for larger units and lower operating costs. Another interesting event of 1953 was the installation of three General Electric 216,176-kva turbine-generators, largest of their kind ever built, to supply power for part of the nation's atomic energy program. And a new \$3,500,000 turbine-development laboratory is being built to help improve turbine-component design for more efficient use of steam in power generation.

**The largest circuit breakers** G.E. has ever built—66 of them—began rolling off production lines for the nation's highest voltage (330,000 volts) transmission network. These breakers can interrupt 25,000,000 kva in 1/20 of a second, enough capacity to protect the highest power concentration known today. And a new \$1,500,000 sound-testing laboratory, started in 1953, will study sonic characteristics of large General Electric power transformers to make them better neighbors in residential areas.

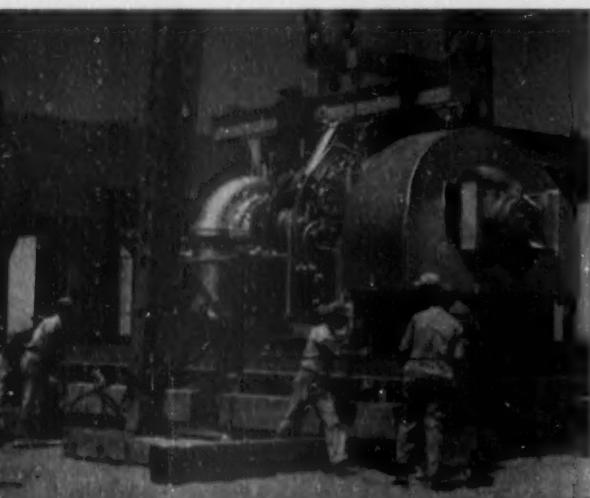
**New G-E distribution transformers** have "all-purpose" terminals to handle connections of either aluminum or copper. During 1953, General Electric shipped its 5-millionth distribution transformer. A new lightning arrester began appearing on 7200- and 7620-volt G-E pole-type distribution transformers, designed to help prevent circuit grounding. Another step toward a complete line of General Electric Type I-50 watthour meters was taken with the development of an I-50 universal meter incorporating latest design features for greater accuracy.

*Progress is our most important product*

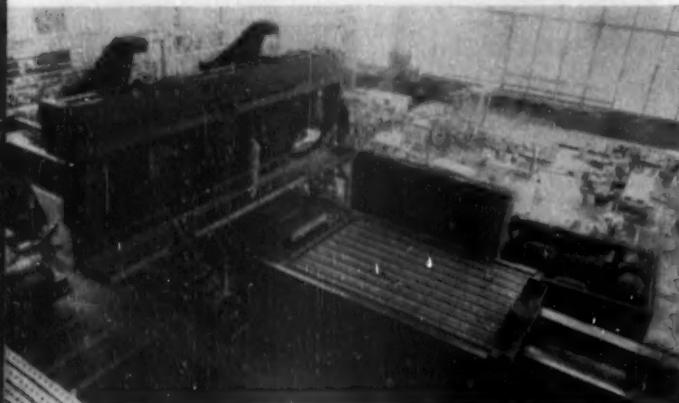
**GENERAL**  **ELECTRIC**



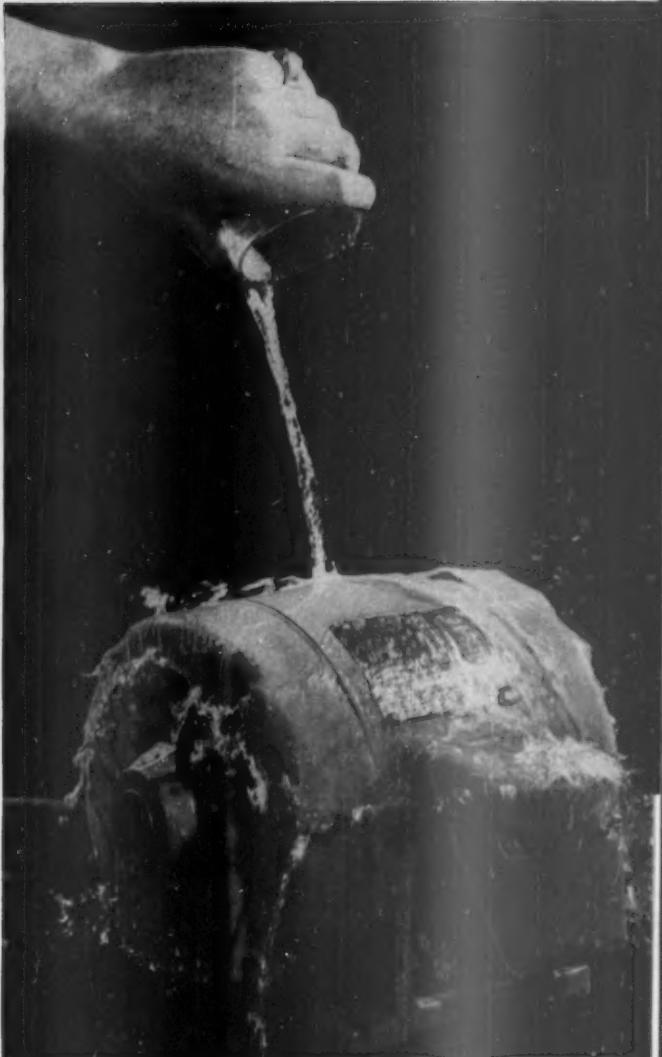
**DELIVERING STEEL AT 80 MPH.** A new 7000-fpm rolling mill, system-engineered by General Electric and similar to the one above, delivered marketable steel on its first day of operation. Also, G-E engineers helped convert the world's fastest reversing blooming mill to electric drive in a record  $7\frac{1}{2}$  days.



**NEW APPLICATIONS FOR GAS TURBINES.** Since this application for gas-pipeline pumping, new uses have been found for the gas turbine. The first installation in a petro-chemical plant was made by General Electric in 1953; it is also being used for power generation, locomotives, and field gas repressuring systems.



**GIANT MACHINES HARNESSSED WITH TAPE.** Large machines like this one—which can manufacture an entire airplane wing in one operating cycle—can now operate far more efficiently. Record-playback control directs all movements of the machine automatically from information recorded on magnetic tape.



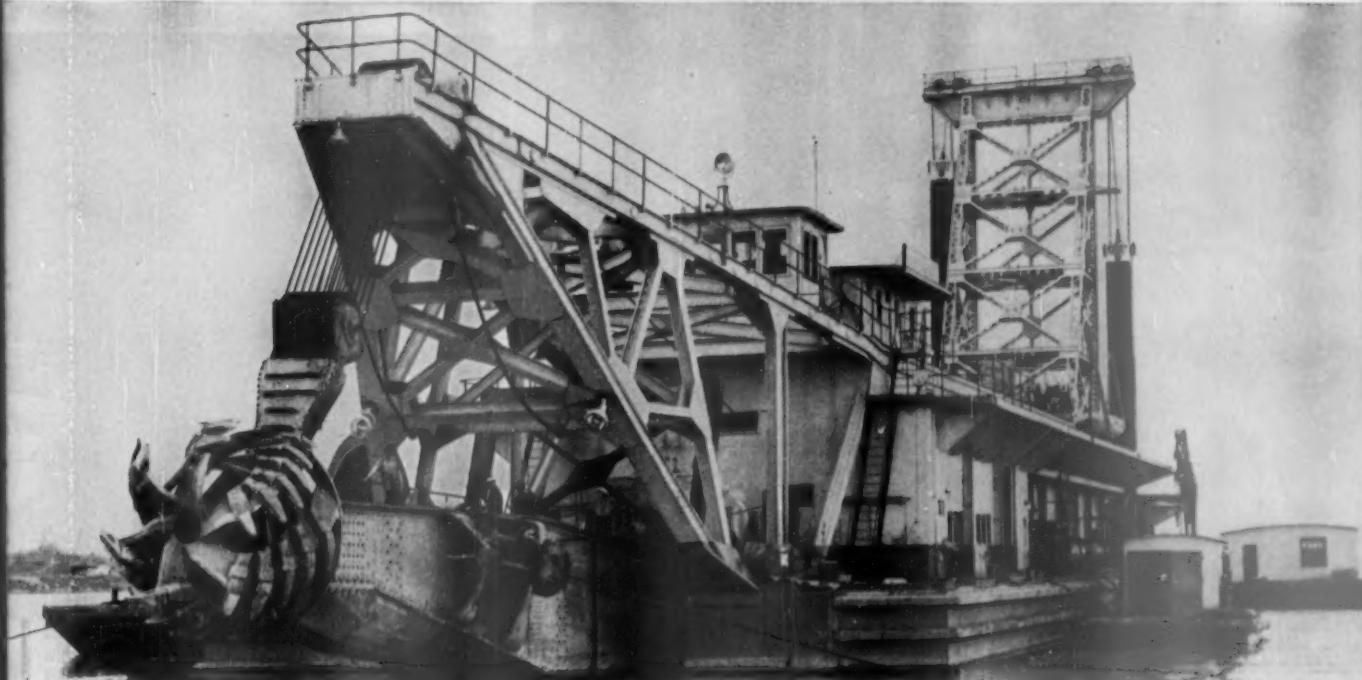
**NEW MOTOR MILESTONE.** General Electric's new Tri-Clad\* "55" motors are smaller, up to 40 per cent lighter for the same ratings. The complete line of dripproof, enclosed, and gear-motors features a silicone coating to virtually eliminate insulation failure due to moisture, and a sonant design that reduces motor noise levels.

\*Reg. Trade-mark of General Electric Company.



**REVOLUTIONARY ARC WELDING EQUIPMENT.** New General Electric Fillerarc equipment for consumable electrode gas-shielded welding now makes reliable, high-speed welding of aluminum, stainless steel, copper, nickel, and other metals a production reality, also permits wider application of the process.

## ELECTRICAL DEVELOPMENTS OF 1953



**MOVING 1500-POUND BOULDERS.** The world's largest hydraulic pipeline dredge, capable of digging and disposing of 1500-pound boulders,

went into service during 1953. System-engineered by Canadian General Electric, it is powered by a G-E 8000-hp wound-rotor motor.

# Greater use of electricity in 1953 paved way for new production techniques

In the last six years, the productivity of the average American worker has risen by 20 percent, due largely to the tremendous increase in industry's use of electric power. And, with the individual worker now using electricity at an average rate of 16,000 kilowatt-hours per year, the electrical "content" of the average industrial product has increased 24 per cent during this same period.

A trend towards increased operating speeds exists in practically every industry today. Paper machines can deliver lightweight products at 3500-feet-per-minute. New machine tools can cut metal some four times faster than in pre-war days. Newspaper presses have stepped up delivery speeds to 60,000 newspapers per hour. And rolling mills are driven to deliver cold strip steel at 80-miles-per-hour.

A few General Electric developments of 1953 to help keep pace with this trend included a new miniature induc-

tion motor to meet requirements of business machine manufacturers; a completely new line of fractional-horsepower motors—over 100 different models up to 50 percent smaller and lighter for the same horsepower ratings. By contrast, rolling-mill drives totalling 31,000-hp for a hot-strip finishing mill and wind-tunnel drives up to 300,000 hp for a single tunnel are being built. New control devices included an electronic relay with high resistance sensitivity for more accurate control of small motors.

In the paper industry, the first application of a motor as a direct drive for a paper dryer was made in 1953. Five new models of General Electric rapid-

start ballasts, used in conjunction with rapid-start lamps, provide nearly instantaneous, blinkless starts. A gage was developed to measure the width of speeding hot steel strip, promising a major reduction in the amount of trimming necessary—saving scrap losses.

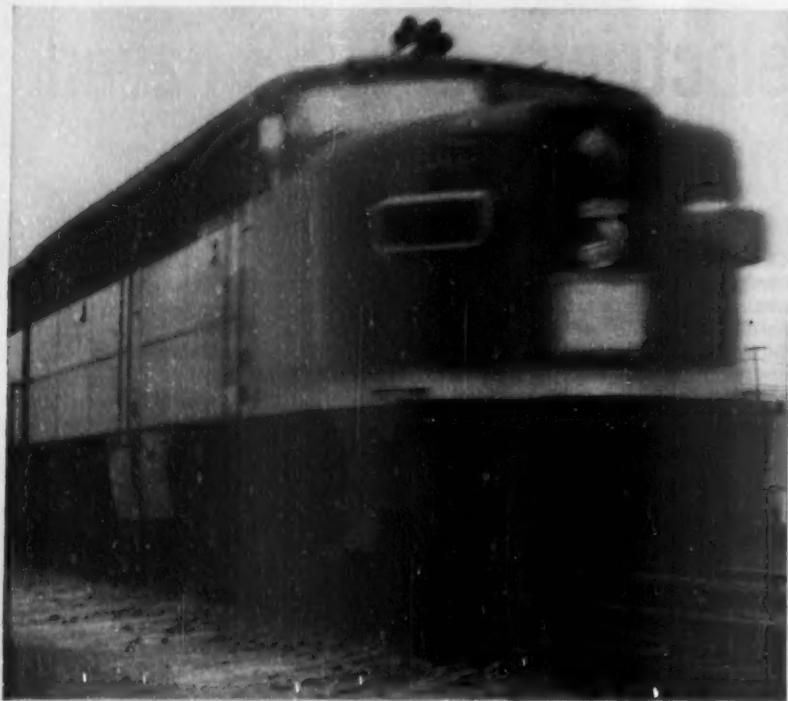
High-speed computers were used even more extensively in 1953 by General Electric to study electrical systems before they are installed. Computers are also being used to help solve complex design problems like those encountered in the manufacture of large steam turbine-generators, transformers, switchgear, jet engines, control systems.

*Progress is our most important product*

**GENERAL**  **ELECTRIC**

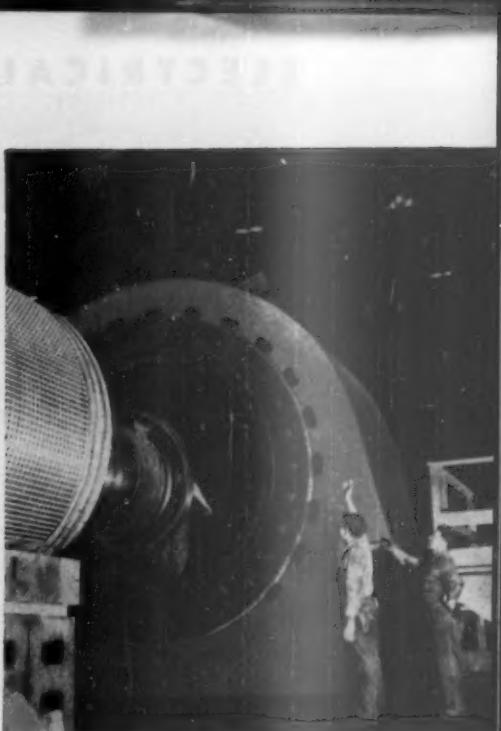


**USEFUL POWER FROM THE ATOM.** As a step in harnessing atomic power, waste heat developed in atomic reactors will be put to use for the first time in this country for heating buildings. General Electric continued development of nuclear engines for both submarines and airplanes as two of its most vital projects.



**MAXIMUM TRACTION FOR LOCOMOTIVES.** When locomotive wheels spin during high-speed operation or starting, traction motors may be damaged. New G-E system automatically indicates when motor overspeeds, removes power, reapplies it after wheel slip is corrected. This device also indicates wheel slide during braking.

**MOST POWERFUL SHIP PROPULSION UNITS.** The United States Navy's most powerful aircraft carrier, the "USS Saratoga," will be propelled by four General Electric steam turbine gear units—most powerful marine drive ever built.

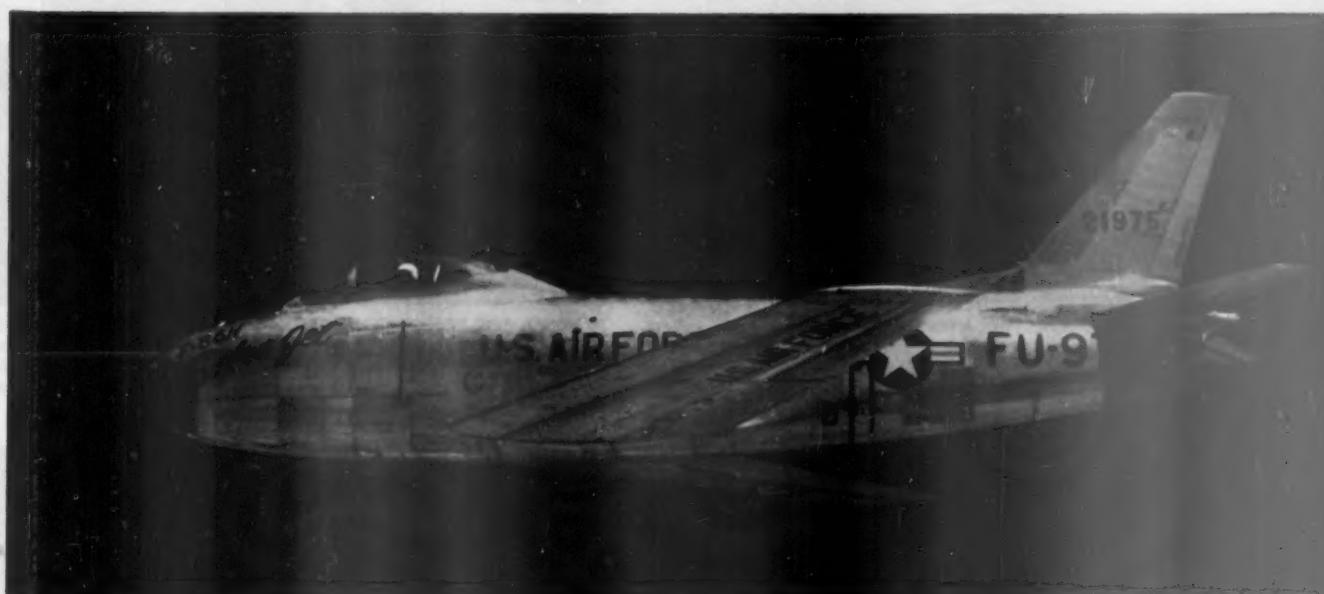


**SUPersonic WIND BLASTS.** Four 45,000-hp motors were delivered by General Electric to the NACA to power supersonic blasts of air for research in aircraft, guided missile design.

Continued  
speed



## ELECTRICAL DEVELOPMENTS OF 1953



**MOST POWERFUL G-E PRODUCTION JET ENGINE.** The new General Electric J73 aircraft jet engine found its first use in the North American F-86H. This engine develops far more thrust, yet has about the same frame size as its famous predecessor, the J47. Mean-

while, it was announced during 1953 that a 100 per cent increase in life expectancy of the General Electric J47 jet engine assured savings of \$100-million to the United States Air Force—a savings which will be passed on to the American taxpayer.

# G-E research and product developments land, air, sea transport in 1953

Highlights for 1953 included development by G-E engineers of a rocket propulsion motor capable of producing over 20,000 pounds of thrust. Production began on what is probably the smallest d-c motor ever built by General Electric—rated .002 horsepower and controlled by the output of two tiny vacuum tubes. It will be used in the electrical systems of modern bombers. A new high-performance aircraft-generator system helps provide maximum power protection for both military and commercial aircraft. A mass flowmeter system was also developed to measure accurately the fuel consumption rate of jet aircraft engines, vital in flight computations. A new flight-control system was also developed to help meet the needs of faster, higher-performance aircraft to be produced in 1955.

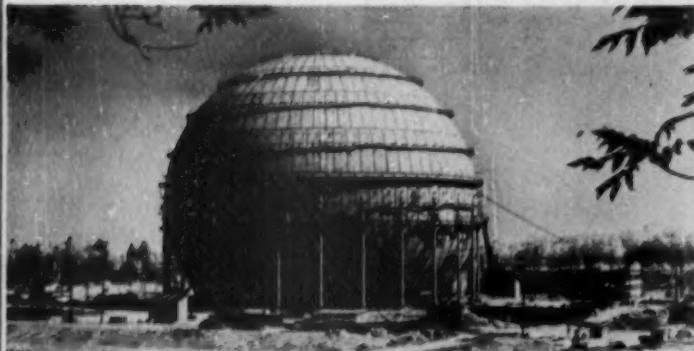
**On the sea**, a new automatic control system for submarines was developed, produced, and successfully tested. Work continued on a prototype atomic power plant for the submarine "Sea Wolf." And four propulsion steam-turbine gear units—most powerful of their type—were ordered by the U.S. Navy for its newest aircraft carrier, "USS Saratoga."

**On land**, G.E. shipped the world's largest diesel-electric mine locomotive for underground service. Weighing 40 tons and rated 420 horsepower, it possesses unique features to allow efficient operation and maximum maneuverability. G.E. also shipped the world's largest electric mine locomotive to a Pennsylvania coal mine. This unit weighs 50 tons and has a rating of 600 horsepower.

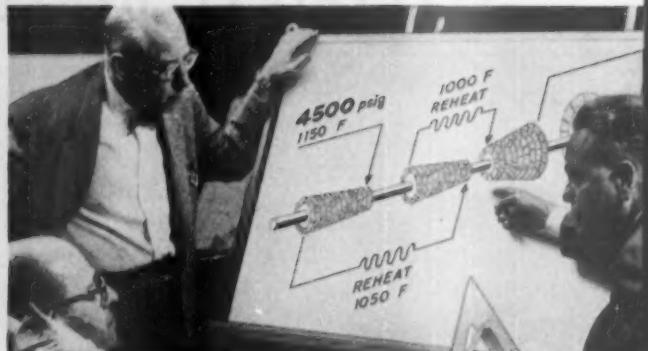
*Progress is our most important product*

**GENERAL**  **ELECTRIC**

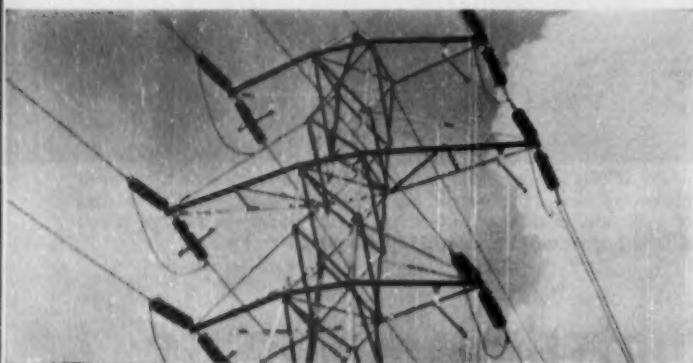
## ELECTRICAL DEVELOPMENTS OF 1953



**WHAT'S AHEAD FOR THE ATOM?** This 18-story-high sphere, completed in 1953, will be used for testing the prototype of an atomic power plant designed by G.E. for the U.S. Navy submarine "Sea Wolf." Experience gained from this type of research has accelerated the development of atomic power for peacetime uses.



**NEW ERA FOR POWER GENERATION?** G.E. has contracted to build a steam turbine-generator to operate at 4500 pounds initial steam pressure, twice as great as any unit now in operation, and at initial temperature of 1150 F. This daring forward step will permit a new standard of efficiency in the generation of electric power.



**HIGHER-VOLTAGE POWER TRANSMISSION?** Transmission equipment now in use can handle up to 330,000 volts. The growing need for electricity will force an ever-greater concentration of generating capacity and higher voltages. If higher-voltage transmission is needed, General Electric will be able to build the equipment.



**PROGRESSIVE AND ACCELERATED AUTOMATION OF AMERICA'S FACTORIES?** With the automatic factory already here in some industries, acceleration of this trend will make the mills and mines of tomorrow even more dependent on electric power in order to meet their growing needs—and do it competitively.

## How the electrical industry will serve you tomorrow

**General Electric looks forward to helping you  
raise your operating efficiency, supply your expanding markets**

To meet the nation's growing power needs, the electrical industry is setting an example of engineering enterprise and financial daring. By 1954, the nation's private utilities will have invested \$18 billion since World War II. Installed capacity of electric utilities is expected to rise from 76 million kilowatts in 1951 to 159 million kilowatts in 1961—more than double. In other words, the electrical industry is expected to grow more in the next ten years than it has in the last 75 years.

General Electric, for example, has announced plans for more research laboratories, besides many new manufacturing facilities begun or completed during 1953. One laboratory will be for the development of metallurgical materials, another for fundamental work in the field of combustion. Both will be part of G.E.'s multi-million dollar Research Laboratory in Schenectady. By the end of 1954 G.E. will have invested over \$1 billion in new plants and equipment since the end of World War

II, a figure which includes a new sound-testing laboratory for power transformers and a \$3,500,000 turbine-development laboratory.

We at General Electric invite you to continue working closely with us in "thinking big" about the future. Whatever your business, whatever your needs in electrical equipment, call your local G-E Apparatus Sales Representative early in the "idea" stage of your project. General Electric Company, Schenectady 5, N. Y.

773-3A

*Progress is our most important product*

**GENERAL ELECTRIC**



# MARKETING

## Soft Drinks: Will the Cans Take Over?

● Tradition-flouting Walter Mack led the way. His revolution aims at bypassing the regional bottler, eliminating the problem of deposits and returns on containers.

● On both coasts, the market in canned soft drinks is growing fast, though there still are problems.

At 58, Walter S. Mack, Jr., is still the bad boy of the soft-drink industry. A few years ago, he was the man who bullied Pepsi-Cola from nowhere to the industry's No. 2 spot, right behind giant Coca-Cola. Now he's leading a movement that could conceivably overturn the whole soda pop business: He's putting soft drinks into cans instead of bottles.

Mack made his move last spring. Cantrell & Cochrane Corp., an old-line soft-drink company owned by Mack's National Phoenix Industries, Inc., announced its Super line of drinks in 6-oz. and 12-oz. cans (BW—May 25, '53, p54). These drinks—Super Root Beer, Super Coola, and the rest—were introduced in New York. A few weeks ago, they moved into the Los Angeles area.

Los Angeles is a particularly important market because of the year-round flow of soft drinks down people's gullets. The ruckus Mack stirred up by his bid for this uninterrupted flow hasn't died down yet.

• All Het Up—Everybody is mad at Mack. The glass industry is angered by his claims that glass bottles are inferior. Snorted the magazine Glass Packer: "Half truths and childish claims." Proponents of the flat-top can—the kind you get beer in—are sore at Mack for championing the cone-shaped, cap-topped can. Said trade ads placed by the Pacific Can Co.: "Who does he think he's fooling?"

• Entering Wedge—And the squabble might be dismissed as merely a trade fuss were it not for one thing: Mack is not alone in trying cans. In the past couple of weeks, at least a dozen concerns have announced that they are canning or are going to can soft drinks:

• Can-a-Pop Beverage Co., a Wyoming company that puts out the Can-a-Pop line, will shortly move into the Los Angeles market.

• White Rock Bottlers Co. of Los Angeles is already established there with canned drinks, says it will open up soon in Tacoma.

• Dad's Root Beer, a Chicago-based, nationally distributed drink, will make its canned debut in a few months.

• A new Philadelphia concern, Beverage Products, Inc., will begin canning drinks in flat-top cans this week.

• Mission Dry Corp., already producing canned noncarbonated fruit drinks in California, will open up in Spokane this month.

• Pioneers—This is not the first time that canned drinks have shown up on the scene. Cliquot Club tried the idea back in 1938, had to give up because containers weren't developed sufficiently then to handle soft drinks, which are more highly carbonated than beer and more corrosive. More recently (BW—Mar. 11 '50, p100), Walter Mack tried to can drinks when he headed Pepsi-Cola. That time, says Mack, it was the inertia of tradition-steeped industry that wrecked plans.

"Everyone else has changed his way of doing business," he commented last week. "The soft drink industry is the only one that hasn't."

• Facts of Life—Roughly speaking, the making and distribution of soft drinks is the same as it was 50 years ago. The soft drink company sells its syrup to the local bottler, who fizzes it up in bottles and carts it around to the retailers. Franchises are still lined up pretty much on the 20-mi. radius that was the practical limit in the days of horse-drawn wagons.

To the bottler, the crucial factor is the returned bottle. Every bottle that goes out filled with soda pop should come back empty—bottlers spend half their time collecting, sorting, washing, and inspecting empty bottles. It's worse yet when the bottle fails to come back—as frequently happens. Then the bottler loses money. He keeps a 2¢ deposit, but the bottle may have cost him 5¢.

Furthermore, there is an inventory problem. A research concern, the Home Makers Guild of America, recently did a study for Owens-Illinois Glass Co. It

showed that, of the nation's 23-million cases of bottles in circulation at any one time, approximately 16-million are empties.

• Shakeup Threatened—The can threatens to shake this system that's based on the bottle and the bottler. In Mack's case, he wants to end the whole franchise system at one blow by creating his own canning plants around the country and shipping the stuff ready to drink.

Other people in the industry scoff at the economics of this. A case of Mack's canned 6-oz. drinks weighs only 13 lb.—about a quarter as much as a case of Coca-Cola. But Mission Dry, for instance, figures that it still isn't economical to ship water, even in cans, more than 100 miles.

Nevertheless, the threat to bottlers remains. Mission Day figures that canning its beverages will reduce the number of franchised bottlers from 200 to 50. The Dad's Root Beer people likewise figure that only a "few" of their present 300 franchise holders will be in on the canning end of the business.

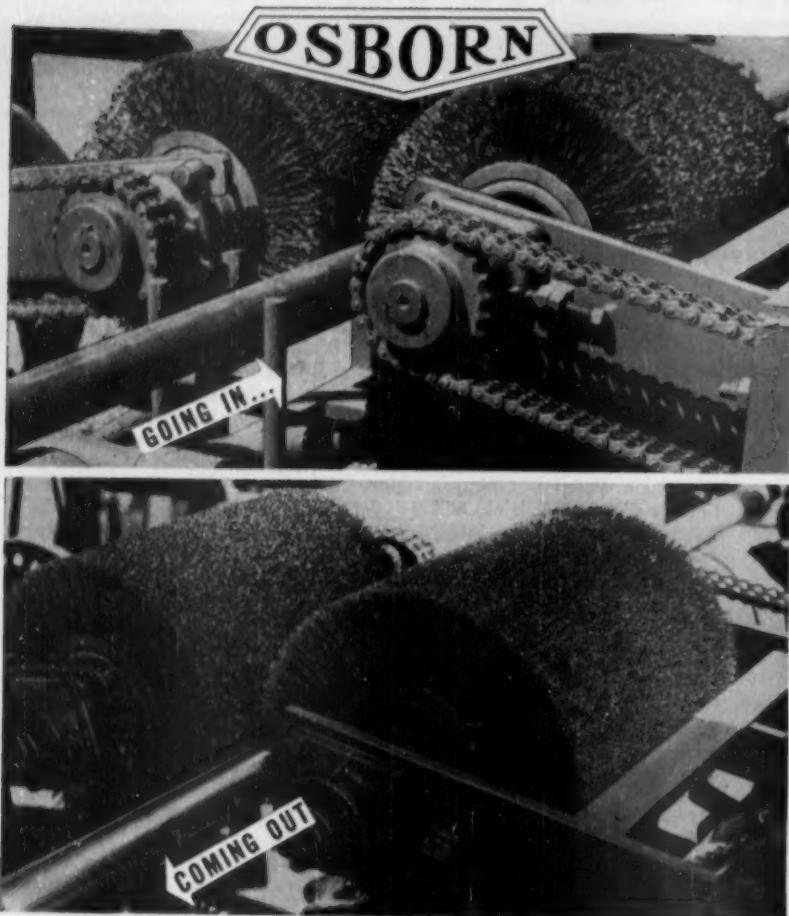
• The Stakes—What will happen to the nation's 6,000 bottlers if canned drinks really take hold? It could be that they would face something like the attrition that reduced America's breweries from hundreds to scores. They might become merely distributors for the centralized plants, and Mack has even bypassed that step by distributing his drinks through grocery channels.

• Beer Chaser—The parallel with the beer industry has occurred to practically everyone who deals in soft drinks. They know that 31% of all packaged beer is sold in cans today, and that this growth has a powerful effect on increasing the market power of the so-called "shipping" brewers—the national concerns—as against the local brewer.

There is an irony here. To make up for losses inflicted by the national brewers, local brewers are going into soft drinks—a line that's now threatened by the same centralization. The Can-a-Pop people formerly made beer; Walter Mack recently worked out a merger arrangement with a New England beer company, the Croft Co.

Actually, it was the successful canning of beer that made the canning of soft drinks possible at all. It proved this: People will pay a premium price for the convenience of a can as against the bother of returning a glass bottle and collecting a deposit.

• Matter of Cost—Of course, there is still the matter of economics. A recent



## Turns out a manhour saving of 90%

**This brushing** machine cleans pipe with one-tenth the manhours required for hand tool brushing . . . and does a thorough job. The pipe passes between these Osborn Master<sub>®</sub> Wheel Brushes, whirling at 1800 RPM. Loose millscale and corrosion disappear, leaving a perfectly clean surface for painting.

This "push button" brushing operation is typical of thousands devised with the help of the Osborn Brushing Analyst. Very likely, he can help you . . . whether you process pipe or any of a multitude of other metallic or non-metallic products. Call your nearby OBA today to help cut your cleaning, finishing and deburring costs—or write *The Osborn Manufacturing Company, Dept. A-29, 5401 Hamilton Avenue, Cleveland 14, Ohio*.

**FREE:** New booklet on deburring with Osborn Power Brushing. Write for your copy.

# Osborn Brushes

OSBORN BRUSHING METHODS • POWER, MAINTENANCE AND PAINT BRUSHES  
BRUSHING MACHINES • FOUNDRY MOLDING MACHINES

" . . . for the flat-tops, the cost of new equipment can run anywhere from \$50,000 up . . . "

SOFT DRINKS starts on p. 47

editorial in Bottling Industry magazine summed it up this way:

"There doesn't seem to be any possibility that the cost of can packaging can ever be brought down to the cost of bottle packaging. The cost of a can (including the 24-can carton) is 3½¢. The average cost of bottle packaging—figured on the basis of 5¢ per bottle, an average of 25 trips, a 2¢ deposit, and including breakage at the plant—is about 4¢. That's a difference of 3.4¢. While there are certain delivery and production savings in using cans, these savings do not come near approaching 3.4¢ per unit."

The result is a premium for canned drinks over bottled drinks. However, champions of the can are relying not only on the American consumer's love of convenience but also on one other powerful factor: the desire of retailers to get out from under the nuisance of returned bottles.

Some observers figure that retailers would feel repaid even if they got a lower markup on the cans than they do on the bottles.

• **Cone or Flat-Top Can?**—Admittedly, there are technical problems to be licked by the can industry before it has the ideal container for soft drinks.

The big can companies, American Can and Continental Can, are enthusiastic about the future when they compare the 30-billion "packages" of soft drinks a year with the 25-billion units of beer. But they are cautious in making claims.

American, the more cautious, at the moment is selling no cans to the soft drink industry.

Continental is selling conical cap-top cans to Walter Mack and will supply its first flat-top cans for soft drinks to Beverage Products in Philadelphia. But it admits openly that the flat-top can will not hold some of the higher-powered soft drinks, such as soda water. It is generally agreed that the cap-top can can hold pressure better, but many people object to the cap-top on other grounds—among them the difficulty of stacking cap-top cans in the refrigerator.

There are still other problems, such as the cost of converting from a bottling to a canning operation. In the case of the cap-top cans, the cost is only a few thousand dollars, and that will undoubtedly give them at least a temporary edge. For the flat-tops, the cost of new equipment can run anywhere from \$50,000 up.

# CROWN® SPRA-TAINER® Does It Again! Wins Top Awards AT C.S.M.A. "AEROSOL FESTIVAL"



Henderize, Inc.  
Sacramento, Calif.

Again in 1953 hundreds of entries competed in the package design contest at the annual "Aerosol Festival" of the Chemical Specialties Manufacturers Association in Washington, D. C. Again, SPRA-TAINER pressure packages walked away with top honors—including Grand Prize.

Look at these winners. Think! Wouldn't your product, too, win more sales in the distinctive Modern Design of SPRA-TAINER?



*Created by Crown to have exclusive "No Top Seam, No Side Seam" construction, SPRA-TAINER is the world's original and leading lightweight pressurized container . . . one of Crown's famous family of finest quality cans for the products of American industry. We'd be pleased to serve you.*

## CROWN CAN

DIVISION

CROWN CORK & SEAL COMPANY, INC.

*One of America's Largest Can Manufacturers*

PHILADELPHIA • CHICAGO • ORLANDO • BALTIMORE • NEW YORK • BOSTON • ST. LOUIS

# Why People Buy a Particular Brand of Appliance

What influences them varies with the appliance they are buying

## Refrigerators

This percentage... of buyers...	said this influenced their choice of brand
32.9%	features
28.4	price
13.7	size
13.6	recommendations
13.4	reputation of company
8.1	appearance
6.6	availability
4.2	operation, construction

## Television Sets

This percentage... of buyers...	said this influenced their choice of brand
23.6%	price
21.1	recommendations
19.2	quality of picture
15.4	appearance
12.2	reputation of company
8.1	advertising, promotion
5.3	past experience
5.0	good reception

## Automatic Washers

This percentage... of buyers...	said this influenced their choice of brand
32.8%	recommendations
19.8	price
14.8	method of operation
13.5	suds saver
12.1	reputation of company
8.9	cleaning ability
8.2	past experience
7.0	construction

## Vacuum Cleaners (tank type)

This percentage... of buyers...	said this influenced their choice of brand
25.5%	salesmanship
18.3	price
18.1	cleaning ability
17.3	past experience
16.3	recommendations
12.2	attachments
11.1	ease of using
6.0	reputation of company

## Radios

This percentage... of buyers...	said this influenced their choice of brand
36.6%	gifts and prizes
19.8	price
14.5	appearance
13.3	reputation of company
10.3	size, shape
10.3	tone
7.4	past experience
7.2	recommendations

## Electric Ranges

This percentage... of buyers...	said this influenced their choice of brand
25.0%	reputation of company
25.0	price
14.7	ovens
11.8	appearance
11.0	size
10.6	family connection with company
9.9	burners
8.1	availability

Note: Percentages add up to more than 100 because people gave more than one reason.  
Only the important factors are listed here.

Data: Burke Marketing Research, Inc.

BUSINESS WEEK

## Loyalty Doesn't Count Much

The greater the swing toward a seller's market, the greater the manufacturer's concern about what makes the customer tick. In particular, the manufacturer wants to know what steered the customer to or away from his brand. Burke Marketing Research, Inc., of Cincinnati, went out to find the answers to this question as it applied to six different appliances. The detailed reports of its findings are available for sale to manufacturers. Some of the broad conclusions show up in the tables above.

It's hard to generalize on the results, but this much is plain:

- The customer has his (in this case, usually her) eye on a lot of things when he buys.

- What she relies on to make up her mind depends on what she is buying.

In the appliance field, brand loyalty is low.

**Method**—To study the six items, Burke researchers went to 7,183 housewives. Whenever they came to one who had bought a new appliance in the past two years, they stuck with her, probed to find out why she had chosen the brand she had settled for.

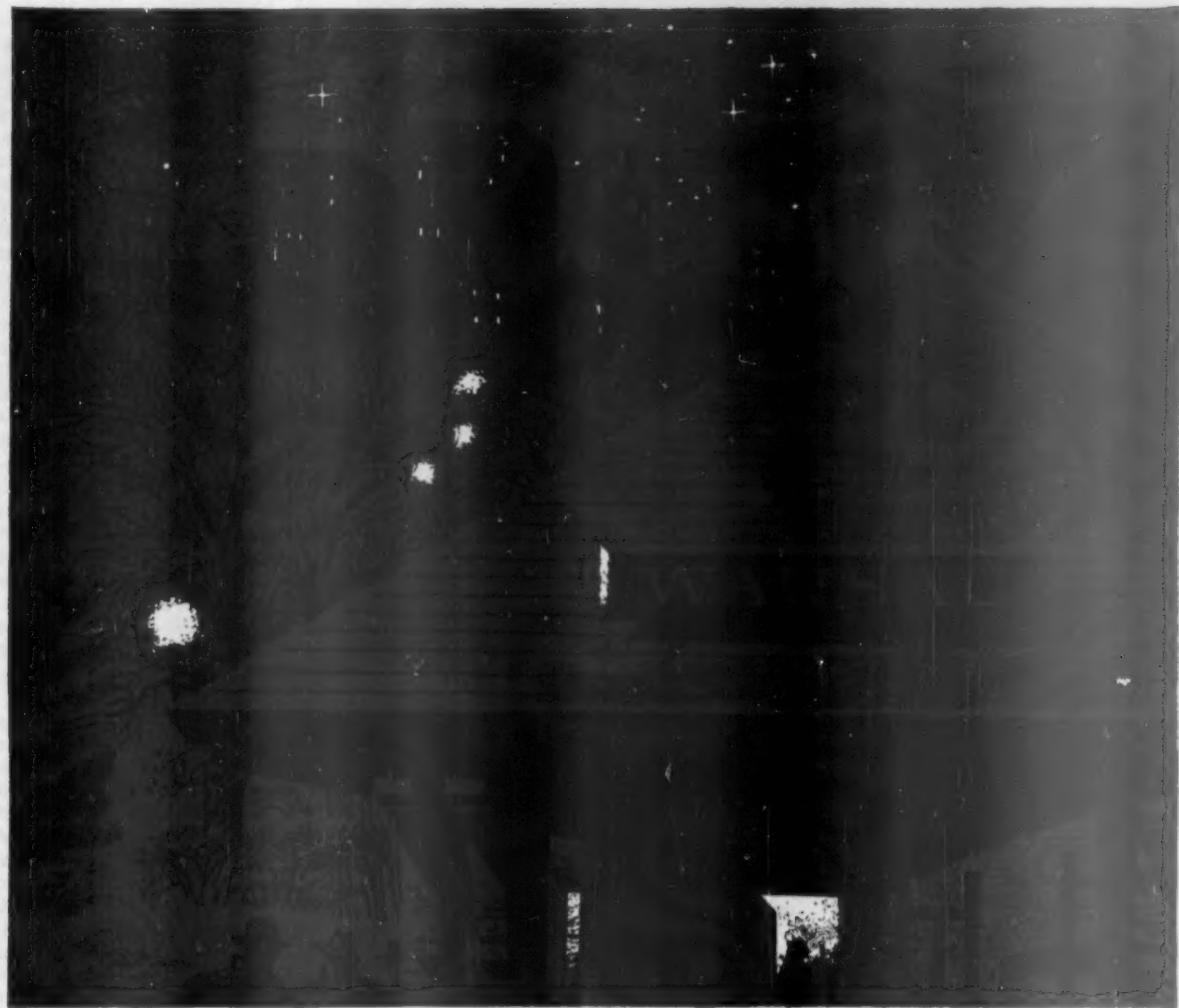
The size of the samples varied. Biggest was 1,877 for television buyers; the others ran 1,113 for vacuum cleaners, 1,030 for refrigerators, 711 for automatic washers, 595 for radios, and 272 for electric ranges. Naturally, the reliability of the sample varies with the size, but in all cases the studies give the manufacturer plenty to think about.

**Play of Factors**—The most striking thing that emerges from the tables is that the same factors carried different weights for different products. In re-

frigerators—which have been around a long time—it was special features that lured the housewife: the kind of doors, the size and coldness of the freezing compartment, defrosting, arrangement of shelves, and the like.

When it came to an automatic washer, which has a real production job to do, she listened to what her friends had to say. In electric ranges—which is a relatively unsaturated market—she rode evenly with the reputation of the company and the price. Since over a third of the radios were gifts or prizes, she had no choice on the brand in those cases. In vacuum cleaners, often it was the smart salesman that pulled her in.

The fact that she is pretty well-heeled shows up on one point. While price rates high on every list as a consideration, it was a prime consideration



## How come one of the world's most important insurance companies is located in Wausau, Wisconsin?

The fishing's good near Wausau. It's only a stone's throw to where the deer run. Once in a while, they say, a lynx comes down from the north.

And it's the home of one of the world's most important insurance companies.

### How come?

This was lumber country once. And lumbering was a hazardous business. 43 years ago a group of lumbermen joined together to pay the claims of injured sawmill workers under Wisconsin's new workmen's compensation law. The group came to be called The Employers Mutuals of Wausau.

Wausau is no longer lumber country. But Employers Mutuals has stayed. So have the men who guided the company from the very beginning.

### How come?

Because they knew that something good had grown up there. A certain way of doing business that was good. An almost *personal* character. A fairness that bent over backward rather than forward. Policyholders and their employees kept saying that Employers Mutuals were "good people to do business with."

There was a "Wausau personality" about us that people seemed to like and we didn't

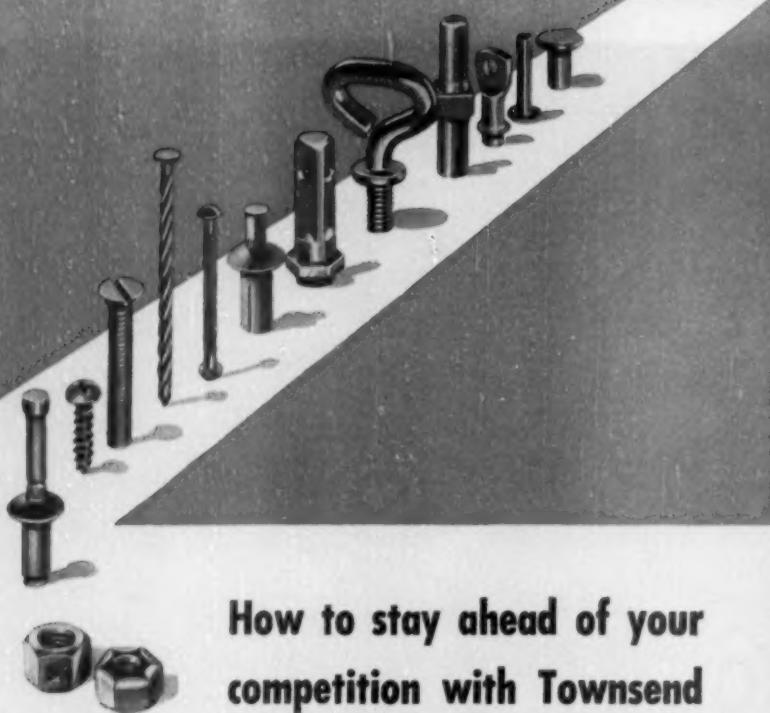
want to lose. We're a large company today. We write all types of casualty and fire insurance, and are one of the very largest in workmen's compensation. We have two reputations, born and raised in Wausau, that we aim to hold. One is unexcelled service on claims. The other is an accident prevention program that means lower costs to policyholders.

We're still "Wausau." But today there are offices of Employers Mutuals of Wausau in 89 cities. "A little bit of Wausau on the sidewalks of New York." And we're still good people to do business with.

# Employers Mutuals of Wausau



"Good people to do  
business with"



## How to stay ahead of your competition with Townsend special fasteners and parts

In today's highly competitive markets many design engineers and production managers find they improve products, reduce material costs and assembly time with Townsend's method of cold-forming fasteners and small parts. It enables them to put greater value into their products and at the same time hold unit costs down.

The Townsend method often replaces costly, material-wasting methods with savings that range from \$5.70 to \$80.00 per thousand. Annual savings are often substantial—\$15,816 on an automobile door lock part—\$12,000 on a

washing machine fastener—\$11,190 on two parts for home laundry equipment—\$15,630 on two refrigerator fasteners—\$5,130 on an electrical connection.

Townsend engineers specialize in the assembly and fastening of all types of materials for all industry. They draw upon more than 10,000 standard and special items developed in 138 years of cold-forming experience and rely upon Townsend's capacity to produce 60-million pieces daily to give you the best in fastening methods. To learn how to improve fastening efficiency, ask to have an engineer call.

# Townsend

COMPANY • ESTABLISHED 1816

NEW BRIGHTON, PENNSYLVANIA

Sales Offices in Principal Cities

Cherry River Division • Santa Ana, California

**THE FASTENING AUTHORITY**—**Experience:** over 138 years—**Capacity:** sixty-million parts daily—**Products:** over ten-thousand types of solid rivets—cold-headed parts—Cherry Blind Rivets—Twinfast Screws—self-tapping screws—tubular rivets—locknuts—special nails—formed wire parts.

**Plants:** New Brighton, Pa.—Chicago, Ill.—Plymouth, Mich.—Santa Ana, Calif.

**In Canada:** Parmenter & Bullock Manufacturing Company, Ltd., Gananoque, Ontario

only for TV—though it tied for first place on electric ranges.

- **No Loyalty**—But far and away the most significant piece of evidence Burke turned up doesn't show on the tables. That is the fact that brand loyalty means little to most housewives. In all six categories, only around a fourth of those who had bought a replacement for an old appliance in the past two years repeated their original choice; three-fourths of them bought a different brand.

What made them change?

- **Brand A: Pro and Con**—Take the case of refrigerators. Brand A was the top in actual numbers bought (188). It got the second highest rating for repeat purchases—41%. It rated highest on the question: Would you probably buy this brand if you needed a new refrigerator now?

On "features," the most important consideration for all brands, Brand A had only a fair score—28.7% of its buyers cited this as a factor in their purchase against 32.9% for all brands. Its mentions for price also were below par. But on company and service it rated second from the top. It also scored high on recommendations.

It's when you look at the page, "Why you didn't buy," that you see the other side of the coin. Nearly as many customers looked at Brand A and voted against it as bought it. Apparently it had three strikes against it: Commonest complaint was price. Some 38% of those who turned it down found it too expensive, compared with the 31.7% complaint against the price of all brands. On features it ran better than average—but there were still 20% who turned thumbs down partly because it lacked something—usually shelves on the door. The third biggest item against it was that it wasn't available. Some 14.6% listed that as a factor.

Once she had bought Brand A, however, the customer liked it fine. Some 91.5% of the reaction to the new refrigerator was favorable—the best showing of any brand. Apparently the features pleased her; 81.9% cited some features as an additional reason for liking it. Nevertheless, over a third objected to some features—mainly the door and the defrosting system.

Slightly more than half of those who looked at Brand A bought it—a fair showing among refrigerators. Where it lost out, Brand A, a big name in its own right, apparently lost to other big names, which scored higher on either price, features, or availability.

- **Washers**—Some of the other contradictory aspects of the consumer's behavior show clearly in the automatic washer group. Here Brand B led in the number of appliances bought. It got a big boost in recommendations—some 44% cited recommendations against

only 33% for all brands. It also had a big price advantage—scoring second in this category. It had a big selling feature, too, in its suds-saving device—and buyers thought it would get clothes cleaner.

Yet Brand B lost 66 out of the 239 customers who considered it. And the extraordinary thing is that just as price was the second biggest item in its favor, it was the biggest point against it. What happened is quite simple: It is a tough washer to get a discount on. Despite its strong price advantage, no discount meant no sale in many cases.

It's apparent that if you look only at the reasons for buying you may become dangerously optimistic. The case of a company's reputation illustrates this. This same Brand B had a very good record on this count; 26% of the buyers mentioned the company's standing as a reason for buying, against a 15% average for all brands.

That sounds fine till you examine the reasons given for not buying that brand—and discover that 10% of the possible sales were lost because of the company's reputation. The answer in this case seems to be that this company generally offers a lower-priced product than its competitors. That low price won it a lot of sales—but it also made some of the would-be buyers eye the line with suspicion.

• **Key Points**—Careful study of the performance of particular brands would tell an individual manufacturer quite a lot about his product's strong and weak points. Drawing general conclusions is harder, but some may be attempted.

Well-established concerns have an edge—particularly in the newer products. Company reputation loomed largest in electric ranges, lowest in vacuum cleaners. Generally, the giants are pretty sure to be looked at, even though they may not make the sale.

And they don't always make the sale. Aggressive selling and improved features won buyers in the vacuum cleaner field for relatively unknown concerns. Just one very good feature carried the day in refrigerators for a company that would probably rank below the very topnotchers. Significantly, the brand where the smallest percentage thought they would buy the same refrigerator another time had the worst score on that single item—features.

Price apparently enters the picture faster on what might be classed the pure luxury items—TV and radio.

• **Warning: She's Fickle**—But the chief moral of the surveys in these days of rough competition is the fickleness of the customer. It's true that generally half or more of the present owners think they would probably buy the same brand next time. But it's also true that the last time they bought, three out of four tried something different.



## Here's free information to help you reduce material and assembly costs

If you assemble metal, wood, plastics, fabrics or glass, here is a wealth of free information which shows how to increase efficiency and improve products with Townsend fasteners. These bulletins describe a few of the 10,000 special and standard items now being used by all industry to reduce material and assembly costs.

► **Special Cold Formed Fasteners and Small Parts** explains the economy of cold-forming small parts and how to enjoy the advantages of Townsend's design service. Bulletin TL-89

► **Townsend Tapping Screws** describes seven types of tapping screws used for economical, quick, secure fastening of sheet metal, casting, forgings, plastics, plywood and composition materials. Bulletin TL-88

► **Townsend Locknuts** gives data on positive resistance to vibration and shock with Tufflok and Nylok locknuts which provide tight grip through use of special locking inserts. Bulletin TL-63

Manufacturers of appliances, radio and TV sets, automobiles, aircraft, electrical equipment, farm implements, railroad rolling stock—even toys, rely upon Townsend as "The Fastening Authority" to help them fasten materials together quickly—economically—permanently. The bulletins listed below are yours for the asking.

► **Cherry Blind Rivets** shows how this ingenious rivet is used by one man, from one side of the work to rivet "blind" in double-surfaced structures, box sections, tubes and ducts. Bulletin TL-76

► **TWINfast Wood Screws** explains how the two threads and double thread pitch cut driving time, increase holding power in wood-to-wood, wood-to-plastics and metal-to-wood applications. Bulletin TL-67

► **Place Bolts** describes this slotted-type, one-piece, all-metal, reusable locking bolt and how it offers cost savings in vibration fastening. Bulletin TL-73

# Townsend

COMPANY • ESTABLISHED 1816

NEW BRIGHTON, PENNSYLVANIA

Sales Offices in Principal Cities

Cherry Rivet Division • Santa Ana, California

Use coupon below or write

TOWNSEND COMPANY • SALES DEPARTMENT • NEW BRIGHTON, PA.

Please send to me without obligation bulletins circled below:

TL-89    TL-88    TL-63

TL-76    TL-67    TL-73

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

# More TV Sales Meetings

**Two big jobs show how closed-circuit meetings are spreading . . . New plan for marketing produce gets a tryout . . . Paint makers find ways to increase colors, cut stocks.**

Closed-circuit television as a way to hold sales meetings is hardly over a year old. Yet already it's a bouncing youngster. Newest evidence of its growth: two big jobs staged last week by Theater Network Television, Inc., for National Dairy Products Corp. and for Dodge Division of Chrysler Corp.

• For National Dairy's Sealtest Division, TNT televised a two-hour variety show to 15 theaters. Dealers and distributors watched Jack Sterling and his cast from Sealtest's weekly Big Top show, tied up in a package with the company's promotional plans for 1954.

• For Dodge, TNT put on a coast-to-coast parley featuring company executives. Dodge dealers and salesmen in 30 cities got a preview of the 1954 sales and advertising program.

• **Big Jobs**—Theater Tele-Sessions, the division of Theater Network Television that handles the business meetings, has had some other big assignments in the past 13 months. It put on shows for James Lees & Sons (BW-Dec.13'52, p56), American Cancer Assn., and Béne-dix. President Eisenhower used Tele-Sessions to make his only closed-circuit talk from the White House—to 750 Ford management men at Dearborn.

The company has moved into color, too. So far, it has produced color shows for the New York Dress Institute, National Assn. of Manufacturers, and Lee and Disney hats. It's readying a six-city color network with large screen, and it plans eventually to cover more outlets.

• **Versatile**—TNT has a ready explanation for the growth of Tele-Sessions. If these shows are well attended, TNT estimates, they cost the company about \$2 per viewer—considerably less than it would pay out for the conventional sales meeting.

Business meetings aren't TNT's only work. The company has offered several commercial shows to theaters—boxing bouts, college sports, and special news events. This week it signed a three-year contract with the Metropolitan Opera Assn. to televise opening nights of the Met starting next fall.

for perishable foods in carload lots.

Auction rooms are now open in 10 cities: New York, Boston, Philadelphia, Washington, Buffalo, Cleveland, Detroit, Pittsburgh, Chicago, and Lakeland, Fla. Through Selevision, the seller of the produce offers a carload lot, which is listed in advance and certified by a government inspector as to quantity and quality. Buyers bid against each other in all 10 auction rooms as if they were in one market.



The seller gains by finding a broader market for his produce. Instead of committing his produce to a single city, and profiting or losing by market conditions there, he gets the best price from 10 cities with varying local conditions. The buyer gains by getting fresher produce, shipped directly to him instead of spending extra days in the market or in transit. He also has a wider choice of lots.

• **The Mechanics**—When the auction opens simultaneously in all cities, the number of the first lot is flashed on the screens from moving illuminated tape on the teletype. As buyers make their bids, the prices are shown on the screens; the clock over each screen allows 10 sec. to raise the bid.

When a bid stands for 10 sec. without being raised, the sale is automatically closed—unless the seller withdraws the lot, rejecting all bids. When the buyer signs an order, the seller is notified where to send the carload. Selevision, Inc., collects 3% to 5% commission on each sale.

• **Slow Start**—Selevision was invented in 1932 by the late H. H. Stockfeld, who spent years perfecting the system

and trying to put it across to produce markets. For the past six years, the demonstrations and promotion efforts have been leading up to the incorporation of Selevision, Inc., which is headed by Thomas F. Bennett, a retired vice-president of Chemical Bank & Trust Co. Financing has come entirely from sale of about \$600,000 worth of stock. Whitney-Phoenix, Inc., of New York is underwriter.

Last week, Selevision got off to a slow start—every lot offered by Lakeland citrus growers on opening day was withdrawn because bids were so low. Since opening day, however, the operation has perked up as buyers have shed their diffidence and as technical difficulties were ironed out.

Heaviest buying so far has been in Boston, Philadelphia, and Pittsburgh. More action is expected as produce from Fresno, Calif., and Presque Isle, Me., comes on the market in the next few days.

## Paint Mixers

The clamor for a greater variety of ready-mixed colors is not all music to the paint manufacturer. He has the problem of supplying his dealer with enough variety to satisfy the do-it-yourself painters—who don't know how to mix colors—without adding to the dealer's inventory.

The most recent attempt to solve the problem is being made by Devoe & Reynolds Co., Inc. Devoe will supply its dealers with a full range of colors. The 18 best-selling colors come in cans, ready-mixed. The dealer also receives 20 "one-shot" color tubes. These pigments, added to the correct ready-mixed paints, create 180 different colors.

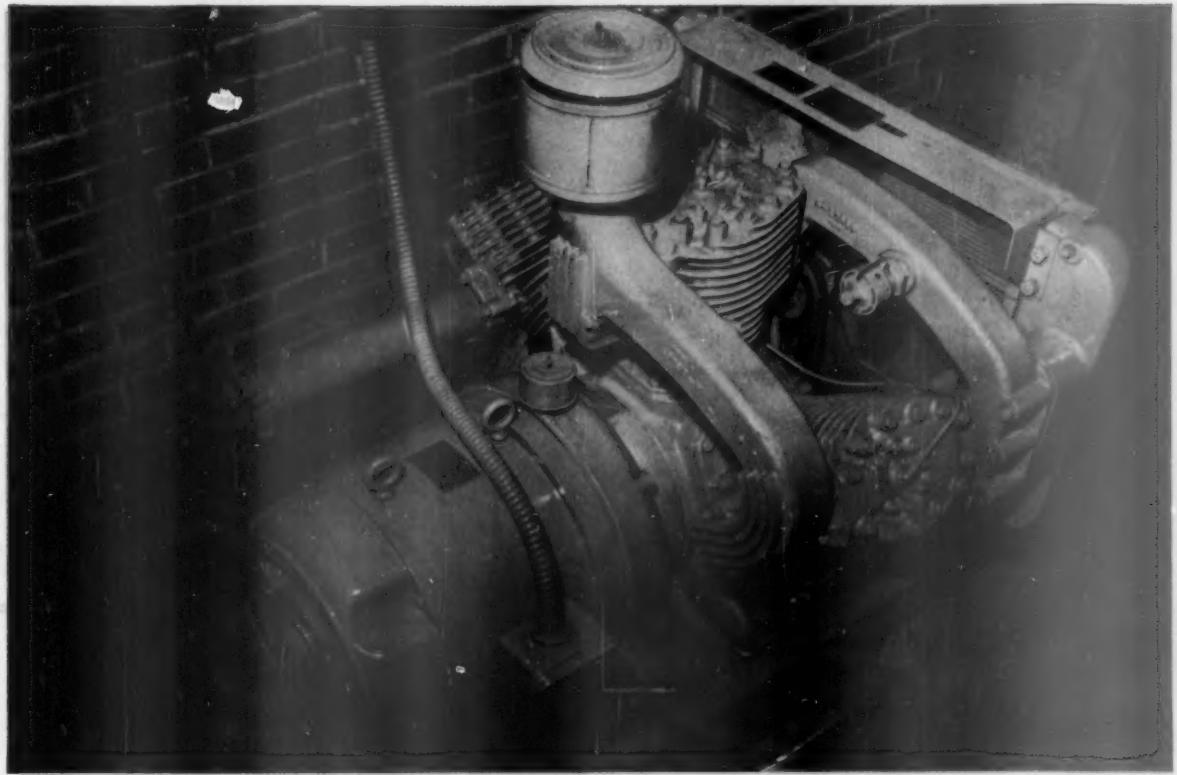
The dealer gets a display rack that features a color selector dial. The customer can spin the dial to select any color and the tube that is needed to mix it. The dealer will mix up colors or the customer can do it.

• **Other Systems**—Paint makers have tackled the inventory problem in other ways, too.

Two years ago, Sherwin-Williams Co. settled on 13 basic colors to be supplied ready-mixed. The company offers smaller cans of other paints to mix up a great variety of colors from the basic 13. Standard Tool & Chemicals, Inc., has an automatic Color Carousel that uses white as the base paint to reproduce any number of colors (BW-Dec. 12'53, p172). Selditz Satin Tone dealers now use tinting units (in glass jars) to mix with a rubber-based paint (BW-Sep. 6'52, p55). And Martin-Senour Co. provides dealers with an automatic dispenser that mixes a variety of colors, using primary and secondary hues as the base (BW-Jul. 18'53, p62).

## Auction by Teletype

A new system of wholesaling fruits and vegetables was put into action last week by Selevision, Inc. It uses a teletype hookup and illuminated screens (picture) to create a national market



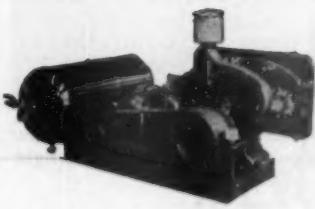
## SAVE ALMOST A MILE EVERY HOUR IN PISTON WEAR\* WITH A JOY WL-80 COMPRESSOR—

\*Piston speed is lower than that of four comparable compressors. So low that you save over 6½ miles of wear each 8-hour day.

NEED A SMALL, COMPACT COMPRESSOR as an auxiliary air supply? Or possibly you want a compressor that can be placed right where the air is used and eliminate long runs of piping.

If your requirements call for 640 CFM or less, there's a Joy WL-80 for you:

- 15 to 125 HP.
- 81 to 641 CFM.
- Pressures to 125 psi, standard.  
(High pressure units to 250 psi).
- Single or two stage.
- Air cooled.
- Force-feed lubrication.
- Eleven models.



Joy WL-80 "Packaged Unit" Compressor can be delivered ready-to-go, complete with air receivers, piping and wiring.

. . . And, you have your choice of drives: Direct, V-Belt, Flange-Mounted. In fact, these compressors are available as packaged units, like that shown at the left, delivered complete with air receivers, piping and wiring.

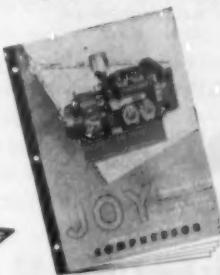
\* \* \*

Get full details by writing for Bulletin A-56. • Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa. In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario.



Consult a Joy Engineer

OR WRITE FOR  
BULLETIN A-56



**JOY**  
W.D. 4942  
SPECIALISTS IN THE COMPRESSION AND  
MOVEMENT OF AIR AND GASES SINCE 1885

## MARKETING BRIEFS

Familiar store names are cropping up far from home: This week in San Diego, Allied Stores Corp. opened a Jordan Marsh store, named for the Boston department store. The new Jordan Marsh isn't a branch of the old; it's a separate Allied store—the first in California. . . . Rich's, of Atlanta, will move in on Knoxville, Tenn., if a merger with S. H. George & Sons of that city goes through. The Knoxville store will still carry the name of S. H. George, however.

Federal Trade Commission charged Aeration Products of Columbus with price discrimination in the sale of Instantwhip and Instantwhip topping. The complaint charges that the company and several of its licensed distributors granted some customers higher quantity discounts than they gave others. Hearings are scheduled for late February.

W. A. Sheaffer Pen Co., like its competitor, Parker Pen Co. (BW-Jan. 9 '54, p54), is trying something new in 1954. Sales forces will be split between its two lines—Sheaffer and the lower-priced Fine-line. Also, for the first time, retailers will be allowed to identify Fine-line pens with Sheaffer. The new tack is expected to help increase Sheaffer business this year—though the company predicts a slight decline in general business.

Delaware's Supreme Court has been asked to rule on the constitutionality of the state's fair trade law in the case of General Electric Co. vs. Phil's Distributors. GE filed suit against Phil's late last year for not observing GE's fixed prices. Phil's, a nonsigner, holds that the state law wrongfully restricts the rights of ownership—including the right to set a sales price.

A new professorship in marketing will be set up at Wharton School of Finance & Commerce under the name of Food Fair Stores Foundation Professorship of Marketing. Financing comes from Food Fair Stores Foundation, a philanthropic subsidiary of the big Philadelphia food chain.

A new dark beer, Continental Special, will hit the market soon, says Blatz Brewing Co. It will come in an 8-oz. bottle, sell at a premium price.

Scotch shipments from Britain to the U.S. jumped last year, according to the Scotch Whiskey Assn. Some 7.2-million proof gal. reached this country, against 6.3-million in 1952.



### We invite you to make this test...

#### Soak it, Boil it, Grease it—Patapar can take it!

You don't have to jump into a swimming pool to test the wet-strength of Patapar Vegetable Parchment. Just put a sheet under water. Soak it for weeks . . . or boil it. Patapar retains its amazing strength and beauty.

When it comes up against grease, fats or oils it resists penetration. One type of Patapar (27-21T) is so grease-proof that drops of oil placed on it stay on the surface in little globules—they do not "creep" or seep through.

#### Many different types for many different jobs

Patapar is produced in different types or variations that meet all sorts of exacting requirements. Some of its diversified uses: wrappers for butter, poultry, margarine, ham, bacon, cheese and other moist foods; milk can gaskets; rubber releasing separators; white print translucent masters for direct print machines; dialyzing membranes; in hospitals for wrapping articles to be sterilized in live steam.

Perhaps in your business there is a job that could be done better with Patapar. Tell us about it, and we will send information and testing samples of the type of Patapar we recommend. Write today.

PATERSON PARCHMENT  
PAPER COMPANY  
Bristol, Pennsylvania  
West Coast Plant:  
350 Bryant Street, San Francisco 7  
Sales Offices: New York, Chicago

HEADQUARTERS FOR VEGETABLE PARCHMENT SINCE 1885

**Patapar**  
Vegetable Parchment  
HI-WET-STRENGTH - GREASE-RESISTING



## Letter to a Steelworker's Wife

You realize there has been great progress in making steel plants safe places to work in. But the subject lies close to your heart and it would be only human for you to wonder a little, sometimes. Here are some facts that should help to set your mind at rest.

It may come to you as a surprise that a large modern steel plant is one of the safest places where a man can spend his time. The experience of the 25,000 employees of our plant at Bethlehem, Pa., during a recent twelve-month period illustrates that point. During that time, for each injury in

the plant, the employees had more than eight injuries while off the job, mostly on the highway or while working around their homes.

In that same period the Bethlehem plant won the annual safety contest for large steel plants, conducted by the Metals Section of the National Safety Council, with a record low rate of considerably less than one lost-time accident for each million man-hours of work. With so low an accident rate,

the average employee's chances of being injured in a normal working day of eight hours are about 1 in 175,000. Pretty safe odds!

One of the finest things about this award is that the Bethlehem plant won it against stiff competition from many other steel plants. The fact that steel plants across the country have such excellent safety records should be good news for the wives and families of steelworkers everywhere!

**BETHLEHEM STEEL**



# PRODUCTION

## Transistors: Big Push Coming

● Basic groundwork is laid, and product engineers are turning out better-quality products at rapid rate.

● Next step—transistor mass production—will give electronic tubes a run for their money.

● Philco's new "surface-barrier" design makes assembly-line transistors a real possibility.

Right now, industry men see a turning point ahead for electronics.

For some time, the tiny transistor has been throwing out threats against the long dominance of its older and bigger electronic cousin, the vacuum tube, as one of the key products of American industry. Its threats up to now have applied to the future rather than the present. But in the last few months rapid developments have brought the transistor to a point where quality can meet exacting standards and where mass production is a practical possibility.

• **Output**—It's the physical make-up of transistors that is the real key to their mass production. The types that were first developed required such careful handling in production that some experts feel they're not even in the running as mass producers. More advanced types now being pushed stand a better chance in mass production processes.

But the technique that really has the industry excited is the electrolytic etching and indium-plating method used by Philco Corp. for its newest type transistors—dubbed the surface-barrier type. Though it may take a couple of years to do it, industry experts are certain it can be adapted to Detroit-type assembly methods.

• **Quality**—This is one of the things a top research man of one firm had in mind when he said last week:

"We—the whole electronics industry—have made more progress with transistors in the last few months than at any time since we started."

He also feels that the industry has now "... won half the battle, the quality half."

• **Status Today**—Broadly, these two remarks mean this: The industry's researchers have already worked out most of the fundamental theories of what makes transistors tick. The groundwork of physics from which everything developed was laid by Walter H. Brattain, John Bardeen, and William Shockley of the Bell Telephone Laboratories, Inc.

Now, engineers have taken over, are developing the product engineering, the pure mechanics of putting transistors together—and doing it faster than the manufacturers can revise the fine print in their catalogs. The result is products of higher quality, with a wider range of operating features. And the industry is on the verge of the next step—finding ways to mass produce the tricky mixtures of minerals that make up transistors.

• **Spur**—Behind the scenes, the industry has been spurred and partly financed by the armed forces. The applications they see for transistors are, strategically, more vital than commercial ones such as a Dick Tracy type of radio for civilian use.

A tiny transistor can amplify electronic waves, both radio and sound, with a fraction of the electrical power that's needed by a tube. And a transistor hardly takes up any space worth mentioning. Savings in power and space are the main reasons why the military wants transistors adapted to the complex electronic gear needed for guided missiles and other atomic-age weapons.

So far the Air Force, Army, and Navy developmental branches have got a fair share of transistors from the manufacturers. But up to now neither they nor the makers have been happy about either quantity or quality.

As for quantity, both the services and the manufacturers know that mass output takes time and can't be rushed no matter how much money you pour into research. Qualitywise, the big complaint has been that transistors, in their operation and service life, haven't met military standards, which are several cuts above those required for commercial products.

• **Improved**—Now for the first time, you sense a feeling of confidence on the quality problem among the military men as well as in the industry itself. Several companies are now making improved transistors that chronologically put the early models back into the Marconi era. Some are versatile in their

operation, do more complex jobs than simply amplify sound and radio signals.

Last summer, two manufacturers introduced transistors that copy some of the tricks of their bigger cousins, the electronic tubes:

• General Electric Co. has one, called 2N43, that is designed for operation at high power (BW—Sep. 12 '53, p56). Smaller than a dime, it can handle three times the power (or 150 milliwatts) compared to earlier models. That rating can't touch the electrical appetite of radio tubes. But it's a sign that transistors are fast catching up and can fit into more jobs that do more work, electrically speaking, such as switching on and off control circuits.

• Sylvania Electric Products, Inc.'s tetrode transistors duplicate the more flexible tube of the same name (BW—Aug. 1 '53, p50). The term tetrode means, for a transistor, that there are four control wires connected to its elements (three is the number for basic transistors). The fourth wire makes possible a greater amplification of electronic signals.

• **Newest**—Philco Corp.'s newest transistors—the surface-barrier type—go a step further by changing the whole make-up of the transistor. The early transistor types, called point-contact (which are still being made), have inner workings similar to the crystals used in the early days of radio. Finely pointed wires are pressed against the surface of the germanium metal.

The trouble is, the job has to be done with a microscope under carefully controlled conditions. What's more, point-contact transistors are so fragile they have had few practical uses outside of the laboratories. They've been helpful guideposts for researchers, but lab tests have shown they don't always meet military or commercial standards of good operation or production.

Philco's new method drops the idea of juggling a needle's point on a germanium surface. The germanium metal is first cut to rough dimensions by regular machining methods; then Philco uses electrolytic etching to cut the tiny metal slab down to the last finicky tolerances.

Here's how the etching works: A liquid salt of indium metal is squirted at both sides of the slab. Electric current, passing through the streams, chemically pares the metal away a thousandth of an inch at a time. When the right dimension is reached, the operator switches the polarity of the

PRODUCTS FOR INDUSTRY

# Staley's

FARM AND HOME



## Beauty Treatment For Cover Girls

*America's Top Models Register Their Prettiest  
on Papers Coated with Staley Quality Starches*

Chances are, that last cover girl you admired on your favorite magazine benefited from a Staley beauty treatment . . . to the paper, we mean! Both "Stayco" C or "Stayco" M Starch Coatings help 4-color printers put blush in the cheeks of our loveliest models.

Actually, dozens of Staley custom made starches are everyday essentials to the 7 billion dollar pulp and paper industry . . . just as over hundreds of Staley products serve industry, farm and home every day.

### A FEW INDUSTRIES SERVED

- Rubber
- Mineral Processing
- Textile
- Adhesives
- Plywood
- Bldg. Materials

### BRANCH OFFICES

- CHICAGO
- NEW YORK
- PHILADELPHIA
- CLEVELAND
- ATLANTA
- BOSTON
- KANSAS CITY
- ST. LOUIS
- SAN FRANCISCO

A. E. Staley Manufacturing Co., Decatur, Illinois



# Styrene Monomer Starts at Koppers



● Styrene Monomer, which traces its chemical origin to coal, is a basic product at Koppers, for Koppers has been a leader in the coal carbonization industry for many years. Koppers has its own raw materials for Styrene Monomer, thereby assuring a continuity of supply.

Styrene Monomer has found extensive application in the manufacture of polystyrene plastics and synthetic rubbers, including GR-S Rubber for tires and other rubber-styrene copolymers for most commercial rubber applications including hose, shoe soles, floor tiles, and rubber mechanical goods.

It is also used in the manufacture

of styrene resins for coating and impregnating porous and fibrous materials, and in the manufacture of polyester laminating resins, styrenated drying oils and styrenated alkyds for paints, enamels and varnishes.

When looking for a dependable source of supply for vital industrial chemicals, it's good business to look to the leaders. Koppers, one of the country's major manufacturers of Styrene Monomer, is prepared to give you the quickest, best service possible, because its producing plant is centrally located. Styrene is supplied in tank-car, tank-truck, and 55-gallon drum quantities.



**Support  
Junior  
Achievement**



**KOPPERS COMPANY, INC.**

Chemical Division, Dept. BW-1304, Pittsburgh 19, Pennsylvania



## Koppers Chemicals

SALES OFFICES: NEW YORK BOSTON • PHILADELPHIA • ATLANTA  
CHICAGO • DETROIT • LOS ANGELES

"...when will transistors of the surface-barrier type get into mass production? Experts say 1956 or 1957 . . ."

TRANSISTORS starts on p. 58

current into reverse. This does two things: stops the cutting action, and plates indium on both faces of the germanium. The plated surfaces act as electrodes to which wires can be attached. Finally, the whole works are boxed up in a tiny container that is hermetically sealed.

There are three big advantages from making transistors this way. Philco gets a transistor that (1) is precision-made; (2) gives the same performance whether it's the first or the last of a production run; and (3) can work in the range of very high frequencies, as high as 70 megacycles, which are popular in some military and commercial uses.

• **Silicon**—Recently, Philco got an extra in performance by making transistors from silicon instead of germanium. The silicon version can withstand four times more heat than cold-blooded germanium. So in hot seasons and climates, transistor-equipped gear is less likely to go on the blink inside airplanes, tanks, and automobiles. But silicon is chemically very sensitive, and developing a practicable manufacturing process would require considerable time before it could be used in any amount in place of germanium.

If Philco and the rest of the industry go along with silicon, or a similar raw material, they will have to set their aim high in quality control. Silicon is plentiful in a rough-and-ready form for uses such as the innards for electric transformers. Transistors need a brand of silicon that's purer than the kind needed for most ordinary industrial products.

A search for chemical processes to produce this purer silicon might slow down the electronics industry.

• **Target Date**—When will transistors of the surface-barrier type get into mass production? The industry's experts are now pegging the deadline at 1956 or 1957. Though they are certain the new transistors can be adapted to assembly-line methods, they feel they need about two years in which to iron out some of the bugs, such as raw materials and production machinery.

The target date of 1956 doesn't mean that, meanwhile, the industry will be walking on a treadmill, getting no place. Today, it has a capacity of around 100,000 transistors per year. And from here out, it will be turning out more and more good quality units that researchers can play with.



### *Col. Drake did it this way...*

**Oil well drilling** in 1859 was largely a matter of guesswork. Lacking scientific instrumentation Colonel Drake sank his historic 69 foot shaft by the "feel" of the drill rope.

### *Borg-Warner does it this way...*



Oil well drilling as practiced by Borg-Warner Research Engineers today leaves nothing to guesswork. To evaluate the effectiveness of a new type drill, B-W engineers mount a 9 channel Consolidated Recording Oscillograph in the drill collar and send it down the hole. At depths as great as 2 miles, this rugged precision instrument accurately measures and simultaneously records such variables as acceleration, temperature, pressure, impact and vibration, thus giving a clear performance picture of conditions at the bottom of the well shaft while drilling operations are under way.

### *You can profit from their experience this way...*



Progress and profit in a competitive enterprise system depend on superior product performance. The Consolidated Engineering Corporation makes a variety of high precision electronic instruments for the measurement and evaluation of physical phenomena, substances and data. These instruments fall into three main types: analytical and control instruments such as the new portable mass spectrometer, left, for research, process monitoring and control... digital data processing devices for converting test data into digital form... analog data processing instruments for evaluating product performance. We'd like to hear from you if we can be of assistance.

## **Consolidated Engineering** CORPORATION

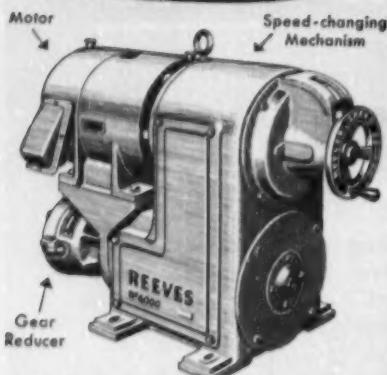
300 North Sierra Madre Villa, Pasadena 15, California

*Sales and Service through CEC INSTRUMENTS, INC., a subsidiary with offices in:  
Pasadena, Chicago, Dallas, Detroit, New York, Philadelphia, Washington, D. C.*

ANALYTICAL  
INSTRUMENTS  
FOR SCIENCE  
AND INDUSTRY

Makes your machines  
more productive

## 3 WAYS



### REEVES Vari-Speed Motodrive®

Here's a complete variable speed power plant—in sizes up to 30 hp and in speed ratios as high as 10 to 1—that gives your machines *all* the advantages of stepless, accurate speed adjustability to the fraction of an rpm. Permits machine speeds to be reduced or increased at will—just by turning a handwheel, pressing a button, or automatically—and without stopping. This means that, on the same machine, you can—

- 1 Process more different sizes and shapes.
- 2 Handle a much wider variety of materials.
- 3 Match machine speed with operator's ability—use slower speeds for beginners; faster speeds for skilled operators.

The Vari-Speed Motodrive is one in a complete line of REEVES Variable Speed Drives now standard on 2,750 makes of machines and easily applied to machines in service. Send for complete information to Dept. 3.

REEVES PULLEY COMPANY • COLUMBUS, INDIANA  
Recognized leader in variable speed control

# REEVES

Variable Speed Drives



CONVENTIONAL WAY to make an aircraft wing involves a lot of specialized workers, an intricate internal skeleton, and a riveted sheet metal surface.



FASTER WAY uses a honeycomb core made of aluminum foil. It's light and easy to work with. When the surface metal is bonded on, it's extremely rigid.

## New Trick for Missiles

When engineers of Glenn L. Martin Co. set out to design a wing for the Matador, first unmanned tactical air weapon in the U.S. arsenal, they had four requirements in mind. The wing had to be (1) light, (2) strong, (3) easy to manufacture, and (4) inexpensive. Their answer was the honeycomb core (above). It replaces ribs and stiffeners, does away with rivets.

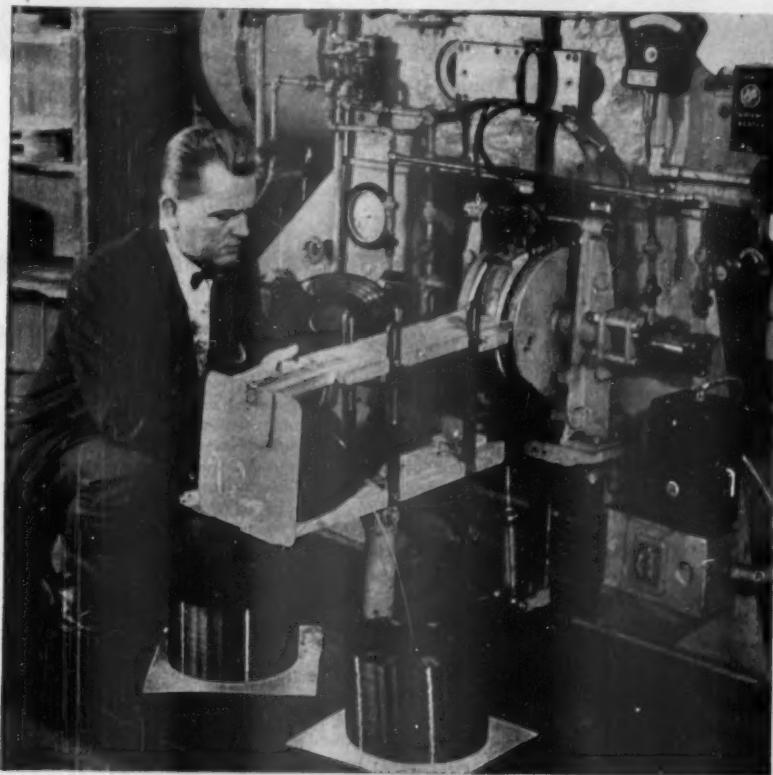
The honeycomb material—aluminum foil—isn't very rigid all by itself. But

by the time it has been put together in a honeycomb, and the sheet metal wing surface has been bonded to it, the wing is rigid enough to stand all the stresses and strains of high-speed flight. Martin engineers use a special electric blanket to supply heat and pressure for bonding.

In making a wing, workers assemble small pieces of the honeycomb in wooden frames, cut them to shape on a band saw.



CONVENTIONAL WAY to make phonograph records: You press biscuits of plastic in a compression molding machine that looks like a waffle iron.



FASTER WAY: injection molding. You force a liquid plastic into a mold hydraulically; finished records drop out on spindles at the bottom.

## New Trick for Records

Injection molding is a process widely used in making plastic buttons. Now Columbia Records, Inc., has put it to work on phonograph records. The result: a production increase of 25% to 38% and a product of strictly controlled quality.

To make its records, Columbia pours polystyrene plastic pellets into a hopper at the top of a machine—and the machine does the rest. The pellets melt into liquids; the liquid is forced hy-

draulically into a mold and cooled; and a record drops out the bottom on a spindle. The machine has controls to make sure all the records are the same weight and thickness. It can turn out two 7-in. records every 20 seconds—against one every 22 seconds for conventional compression molding.

The new injection molding machines are part of a \$1-million modernization program at Columbia's Terre Haute (Ind.) factory.



## THE ROYAL TREATMENT

...that didn't work

Whenever Mr. Big came to visit he got the royal treatment. He would be bowed into the boss's office and the expensive cigars would be pulled out. If there were such a thing as a carpet to unroll, you can bet it would have been for Mr. Big. He was a good customer.

But one day the company lost Mr. Big's account. No one could figure out the reason. His orders were always filled promptly and no complaints were ever heard. Finally the story came to light. Mr. Big used to receive a lot of correspondence from the company: acknowledgment and "thank you" letters, letters about new products, improvements, etc. . . . all processed or printed. Not an individually typed letter in the bunch. After a time this began to rankle Mr. Big, and soon he started thinking bad things about the company and its cold, impersonal letters. Then, one morning he received a "personal" letter from the president of the company which was obviously processed. That did it.

Processed or printed letters are not the answer to cutting correspondence costs. The economical solution is to type letters automatically on Auto-typist equipment . . . the way hundreds of large and small businesses are now doing. Let us send you information on how automatic typing is being used today. No obligation.

Auto-typist

AMERICAN AUTOMATIC  
TYPEWRITER COMPANY  
Dept. 91-D  
614 N. Carpenter Street, Chicago 22, Illinois  
Gentlemen: Please send me your book "How  
to Use the Auto-typist."

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

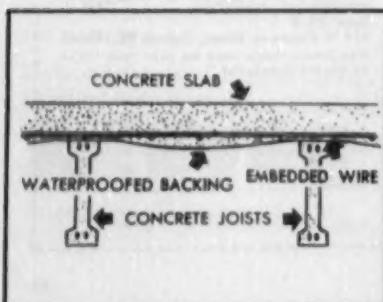
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



The 300-room ocean front Sherry-Frontenac Hotel, Miami Beach, towers 13 stories, cost \$4 million. Steeltex throughout in floors and roof. Henry Hohauer & Associates, Architects. Cashay Corp., Contractors.



Biscayne Terrace Hotel in downtown Miami has 200 rooms, 10 stories, cost \$2 million. 250,000 square feet of Steeltex in floors and roof. Albert Anis and Melvin Grossman, Architects. Edward M. Fleming Construction Co., Contractors.



**NOTE:** In the cross section that the weight of the wet concrete forces the backing away, which permits the galvanized steel mesh to assume its proper position in the slab. Steeltex floor lath also performs two other functions: It permits work on the floor below while pouring is in progress and retains moisture to assist proper curing.



The 9-story Casa Blanca Hotel, Miami Beach, shown here while under construction, is now in operation, cost \$2.2 million, has 250 rooms. Steeltex used in all floors and roof. Roy F. France & Son, Architects. Gaines Construction Co., Contractors.

## Why STEELTEX® has been the overwhelming concrete floors in Miami's

Southeast Florida is one of the fastest growing regions in the country and Miami Beach has the largest concentration of hotels, motels and apartments of any city in the world—more than 375 hotels containing more than 25,000 rooms and some 1,400 apartment buildings containing 36,000 rooms! Here unusual designs are commonplace, the architect is free to use ideas to his heart's content. People who come to Miami Beach are on vacation, they are free to pick and choose the most modern, most beautiful, most comfortable surroundings for their visit to this vacation paradise!

The men who invest their savings in these new buildings want modern design with economy, speed in construction and low maintenance costs in the finished building in order to get a maximum return on their investments.

Concrete, therefore, is the answer and when you use concrete it is only natural to use Steeltex floor lath, the modern, time-and-money-saving, galvanized steel wire reinforcing for concrete which carries its form on its back (see cross section below).

Why Steeltex? Steeltex requires no additional forms or reinforc-



(advertisement)



**A complete vacation resort under one roof, the \$3.5 million DiLido Hotel, Miami Beach's newest, opened last Christmas Eve, has 329 rooms, 9 stories, 2 swimming pools, 300 feet of ocean beach, 120 cabanas. Steeltex used in floors and roof. Melvin Grossman and Morris Lapidus, Architects. Robert L. Turchin, Inc., Contractors.**

## favorite for reinforcing newest hotels and apartments!

ing. It costs less to install than other types of forms and reinforcement for concrete because Steeltex can be rolled out like a carpet by one man (see photo below). Steeltex also saves concrete by minimizing leakage in the freshly poured slab—craftsmen on the floor below can continue working without getting drenched. Steeltex insures a strong floor because embedment of steel reinforcing takes place automatically (see note below). Steeltex allows concrete to cure slowly and properly—guards against excessive cracking—can be installed over any type of joist—will support ample safe loads from 109 lbs. to 886 lbs. per square foot depending on spacing of joists and thickness of slab. No wonder Steeltex is the overwhelming favorite with building designers in America's favorite winter resort.

Regardless of your locale, be it north, east, south or west, if your building plans call for poured concrete floors, roofs, plaster walls or ceilings or Portland cement (Stucco) exteriors, there's a type and kind of Steeltex reinforcing that will do the job better, faster, with less effort at lower overall cost.

See the Steeltex catalog in Sweet's or write for your free copy of a new 24-page, illustrated booklet "Pittsburgh Steeltex, Backbone of Concrete, Plaster, Mortar."



**Algiers Hotel, Miami Beach, cost \$1 million, has 8 stories, 200 rooms. Steeltex used in all floors and roof. Henry Hohauser & Associates, Architects. Taylor Construction Co., Contractors.**



**Prize winning Lanai Apartments, Miami, contains 24 units, took top honors in apartment house class in judging at A.I.A. South Atlantic Regional Conference in Miami last spring. Steeltex used only in second and third floors. Wahl Snyder, Architect. Alonzo Riley, Contractor.**

# STEELTEX®

manufactured by the

**Pittsburgh Steel Products Company**

a subsidiary of **Pittsburgh Steel Company**

Pittsburgh 30, Pa.

(advertisement)



You don't know *when* it will happen.

But you do know it is *likely* to happen. For every day, over 305 industrial and mercantile fires destroy buildings, stop production, shrink profits and cash.

Yet, for a small sum you can usually protect your property with a safety-engineered alarm system that goes direct to Municipal Fire Department Headquarters.

If your community now has a Municipal Fire Alarm System, ask for the name of your nearest Gamewell Engineer. He can show you how little it costs to have the *best possible protection* against fire and water damage. Write today.

**THE GAMEWELL COMPANY**

CHESTNUT STREET

NEWTON UPPER FALLS 64, MASS.



## BUSINESS AREA

re-do for Boston's Back Bay took first prize in Progressive Architecture's first Design Awards Program. The proposed redevelopment project (above) for Stevens Development Corp. has been planned to provide parking, shopping, hotel, and office facilities. The outstanding feature is the 40-story office building,

# What the Architects

It ordinarily takes anywhere from one to five years from the time that an architect has a bright idea to the time that it shows up in a completed building. Hence, the trends that are going to show up in construction in the future are on the drawing boards right now.

To bring these trends into the open, Progressive Architecture magazine has just held its first Design Awards Program, with prizes and citations for the best designs in various classes. The awards that it announced last week give us a look at some of the developments that will be showing up in actual building over the next few years (pictures).

The competition drew entries from 600 firms, ranging from one-man to 1,100-man operations. Not all the ideas are going to find their way into actual buildings. As often as not, an architect has to put his most imaginative plans on the shelf when he gets down to the actual business of suiting his client's demands and the requirements of local building codes. But when the same general idea shows up in a number of designs, you can reasonably expect to see it adopted in future construction.

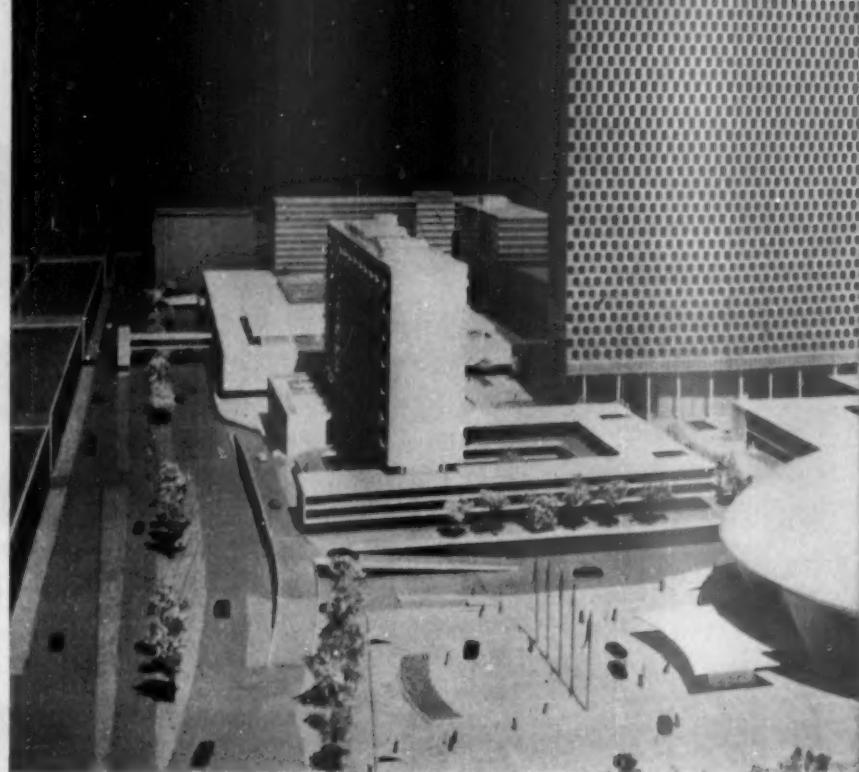
- **General Trends**—For instance, there is an obvious trend toward modular coordination (BW—Aug. 8 '53, p70)—the repetitive use of identical units to cut costs and unify design. Also, selection of materials is getting a lot more attention in working out over-all effects.

These trends are more apparent when you get down to studying the buildings in a particular type. Here's how designs are shaping up in the categories that are expected to account for the bulk of the architect's business this year.

## I. Schools

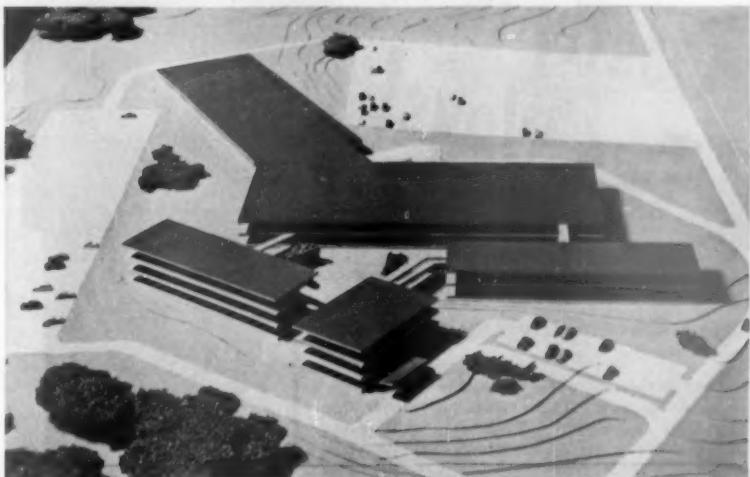
Educational buildings will probably be the big dollar end of the business this year, supplanting defense work that has held the top spot for the past few years. A recent survey by Progressive Architecture shows that most firms expect it to account for about a quarter of their business in 1954.

In all school work, the big drive is to reduce costs. Every part of the country apparently needs more schools than it can afford. To provide additional classroom space, architects are eliminating any space that's not absolutely es-





**SCHOOLS** of the future will continue to spread out into pavilions connected by covered walks. This eliminates many costly corridors, provides a quick exit. Separate cafeterias, auditoriums, and gymnasiums will be replaced by a multipurpose room where a variety of activities can be carried on. The school (above) for Litchfield, Conn., was designed by Marcel Breuer and O'Conner & Kilham.



**LABORATORIES** and light industry buildings follow the school trend to divide up into pavilions. That cuts cost, means less architectural conflict with surrounding homes. Architects are recommending the use of lots of glass and porcelain enamel panels for easy maintenance. RCA Victor's proposed research center (above), in Camden, N. J., was designed by Vincent G. Kling.



**HOMES** are gaining more living space, as separations between living room, dining room, and kitchen drop out. Outside, screening walls are going up around patios and terraces, and the Mediterranean central court is coming back into favor as the American trend to more outdoor living grows. The house (above), designed by Eliot Noyes for himself in New Canaan, Conn., incorporates most of these trends.

lens-shaped to give maximum room around central elevators and utilities. To lure shoppers downtown, there will be an underground parking lot for 6,000 cars.

## Are Cooking

ential. The chief target is corridors (top picture, right). Architects are also gunning for height, another big cost factor. They claim that even in high-cost land areas such as New York City, it's cheaper to build a spread-out, one-story building than to put up an expensive multistory building.

Another big trend in school building is the acceptance of artificial light. Natural light—traditional for classrooms—is being disregarded if it means saving on physical construction.

Specific purpose rooms like cafeterias, auditoriums, are on the way out—replaced by multipurpose rooms where all sorts of activities can be carried on.

### II. Homes

The magazine's contest drew more designs in the residential category than in any other. Architects apparently feel that homebuilding is in for another near-record year.

The most obvious trend is away from the picture window overlooking the neighbor's garbage bin. But that doesn't mean that glass is on the way out. Glass walls are still there, but

Chemicals  
Food  
Products  
Fly Ash

# DUST

## Costly in Two Ways!

How much do you value "neighborly good will?" How much is it worth to keep officialdom away from your doorbell?

Here, stopping 'Dust Losses' from your plant can be very helpful.

And if the dust itself is valuable — as it is in countless plants — you can soon recover the capital cost of the dust recovery installation. From then on recoveries add profit to your balance sheet.

Look into the merits of the AERODYNE, industry's most efficient and flexible dust collector and doing excellent work on many kinds of dust. Capital costs of AERODYNE installations already in operation range from a thousand to several hundred thousand dollars, the high figure referring to an installation in one of the largest utility plants where the AERODYNE solved the fly ash problem from one set of stacks. Several new large orders for the same plant are now being processed.

In sending for our bulletin on the AERODYNE, would you mind detailing your dust problem? Thank you.

**AERODYNE DIVISION**  
The Green Fuel Economizer Co., Inc.  
Beacon

New York



The Green Fuel Economizer Co., Inc., has complete facilities in Beacon, N. Y., for analyzing and testing dusts of all types.

### FLY ASH COLLECTING

Battery of Aerodyne Cones in one of the largest utility plants collecting fly ash coming from pulverized coal fired boilers.



in the house of tomorrow they look out on terraces and patios, which are shielded by walls worked into the overall structure of the building.

### III. Commercial

First prize winner in Progressive Architecture's competition fell into the commercial category, and contained so many advanced design features that it overshadowed other entries. It's an urban redevelopment project (picture, page 66) for Boston's Back Bay.

The project is a double-header: It not only provides improved parking, shopping, hotel, and office facilities, but also will eliminate an unsightly railroad yard, and improve the city's tax return. The final design is the product of: Pietro Belluschi, Walter F. Bogner, Carl Koch & Associates, Hugh A. Stubbins, Jr., the Architects Collaborative.

While Boston businessmen are excited about the coming of this ultra-modern center, the project actually was prompted and is to be financed by outsiders. Stevens Development Corp., which plans to build the center, is headed by Roger L. Stevens (who also heads the group that owns New York's Empire State Building). Stone & Webster Engineering Corp. are the consulting engineers and are slated to be construction managers.

### Factory Cost Index: A New Statistical Tool

Still another statistical tool grew out of the Bureau of Labor Statistics' massive reservoir of numerical facts this month. Like others that use BLS information as their base—the cost-of-living index, wholesale price indexes, and others—this new statistical development can be broadly useful to industry.

The new tool is called the "factory cost index." It's intended to help management measure the trend in costs of basic maintenance operations. It was developed by Factory Management & Maintenance, a McGraw-Hill publication, and introduced in Factory's January issue. Factory says the index will appear month by month "to show the changes in the cost of materials and labor used in plant maintenance."

Using data published by BLS, Factory's initial publication of the new index includes a series of year-by-year cost index charts covering the years 1948 through 1953. The maintenance cost trend, according to the 1953 figures, seems to have stabilized at about 40% above costs in the base year 1947. Of the 39 materials that go into the index's make-up, costs of 30 remained constant in 1953; five moved down; and four moved up.



## Hits a \$19.95 "Jackpot" on one machine every day!

It's a neat trick and this prominent manufacturer did it. He found that just *one* machine was losing him \$19.95 a day—a loss made up of 1½ manhours plus downtime for lubrication—and a needless waste of gallons of lubricant.

Now, \$19.95 a working day adds up to \$5067.30 loss a year—money tossed away! So, the call went out for a trained Alemite lubrication specialist. Working with plant engineers, the solution was readily found—an Alemite Centralized Lubrication System.

Results were startling! Today, the machine is *automatically* lubricated while in operation. No downtime—

no lost production—and oil consumption is reduced from gallons to 6½ ounces a week! So—the company hits a tidy \$19.95 "jackpot" in savings, on only *one* machine, *every day*!

\* \* \*

Whatever you manufacture, chances are your machines will make more money for you when they're equipped with Alemite Lubrication Systems.

Because human error is eliminated and machines need not be stopped for lubrication, you get these important advantages: your machines will deliver "top" performance, longer. You'll need less manhours to make



more products, better. You'll have fewer rejects and less spoilage. You can plan tight production schedules and *keep them*.

If you have a lubrication problem in your plant, why not fill out and mail the coupon? By return mail, you'll receive a valuable free booklet on Alemite Lubrication Methods. At your request, a trained Alemite lubrication specialist will give you an "on the spot" demonstration of how Alemite can save you money.

**ALEMITE**  
REG. U.S. PAT. OFF.  
Ask Anyone In Industry



### FREE! New Booklet

Please send my FREE copy of  
"5 Plans for Better Plant Lubrication"

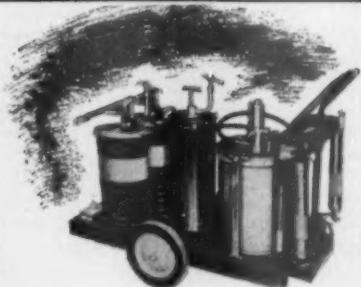
ALEMITE, Dept. B-14  
1850 Diversey Parkway  
Chicago 14, Illinois

Company \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



**Alemite LUBRIKART**—a complete, compact lubrication department on wheels. Provides high pressure lubrication, fills oil reservoirs and hydraulic systems, lubricates gear housings, refills grease guns and oil cans. Saves time, eliminates waste, prevents contamination. Can service any machine in the plant without once returning to the oil room.

# BUSCHMAN

POWERED  
BELT  
CONVEYORS

PAY  
OFF!

TROJAN  
MODEL F-102B

If your problem is handling bulky crates, small stampings or hot, abrasive castings...up, down or on level...there's a BUSCHMAN powered-belt conveyor for your job.

Two basic units...TROJAN and PRESS-TENDER are adaptable to meet most materials handling needs.

#### PORTABLE

Easy-rolling wheels...positive floor-locks, versatile BUSCHMAN units are spotted quickly anywhere or used in permanent installations.

#### ADJUSTABLE

Operating angles of BUSCHMAN powered-belt conveyors are variable and working heights adjustable front and rear.

#### ONE-MAN OPERATION

Sturdily constructed BUSCHMAN powered-belt conveyors can be positioned easily and rapidly by one man.

#### FOR PACKAGES AND FOR PARTS IN OPERATION

Wide range of belt speeds, lengths, widths and heights...cleated canvas, wire mesh, positive-gripping rough top, oil-resistant neoprene or other types of belting available...special feeders, flapper gates and attachments can be furnished to your specifications. Write for free Catalog today!

Complete conveyor systems for all types of industries  
Engineered • Manufactured • Installed

PRODUCE MORE...FOR LESS  
**Buschman**  
Conveyors

C-1789-  
EWB

THE E. W. BUSCHMAN CO.  
4477 Clifton Ave., Cincinnati 32, Ohio

Representatives in principal cities

# Fight Over Ice Melters

Ads for new ice-control products say the chemicals won't pit concrete or poison kids. Old-line manufacturers object that these ads imply the old stand-bys are no good.

January's abundant ice and snow, viewed with alarm by the majority of U.S. citizens, have made at least one industry extremely happy. It's the industry that sells chemical ice-control products—those crystals or flakes that break up the solid sheet of ice on your driveway while you sit comfortably indoors.

By its very nature, the industry is seasonal. Its sales vary greatly, too, from winter to winter. For those reasons, it was dominated for a long time by big chemical companies that sold ice melters as a sort of sideline—sold them in bulk quantities, largely to street and highway maintenance bureaus. In the warm months, and in warm winters, these big chemical companies took up the slack with other products.

But since the war, a whole group of specialty houses has entered the industry. These companies produce trademarked products designed for the housewife to spread on the driveway and sidewalk before her husband comes home at night. Some of the better-known ones are Ice Foe, Ice Kem, Ice Off, Ice Rem, Ice Thaw, Melt, Thaw-Z-Ice, and X-73. The makers have introduced some cagey packaging techniques in an industry that used to talk exclusively in terms of 100-lb. sacks. To get rid of some of the seasonal fluctuation they have gone aggressively after markets in the North—Canada and Alaska, where winters are long and hard.

The specialty houses have sold most of their ice control products in showy 10-lb. to 25-lb. pails and cartons through hardware and department stores. Latest gimmick is Ice Off's carrier carton containing six 2-lb. packages.

• Objection—Veterans in the business applaud the packaging revolution and admire the consumer market that the specialty houses have opened up. But they are not at all pleased with the pitch of the specialty houses' advertising. It has generally taken a negative approach: "Won't harm children," "Won't pit concrete," "Clean, no messy residue." These ads imply, the veterans say, that the old-time ice disintegrators—rock salt and calcium chloride—are no good.

A showdown seems to be shaping up. The claim of the big companies will probably be that the trademarked products are themselves salt or calcium chloride products, occasionally with traces of other elements added. What's true for the old-timers, the big com-

panies will argue, is also true for the new products. The specialty houses will probably reply by playing up the trace elements as cures for the ills of the older products.

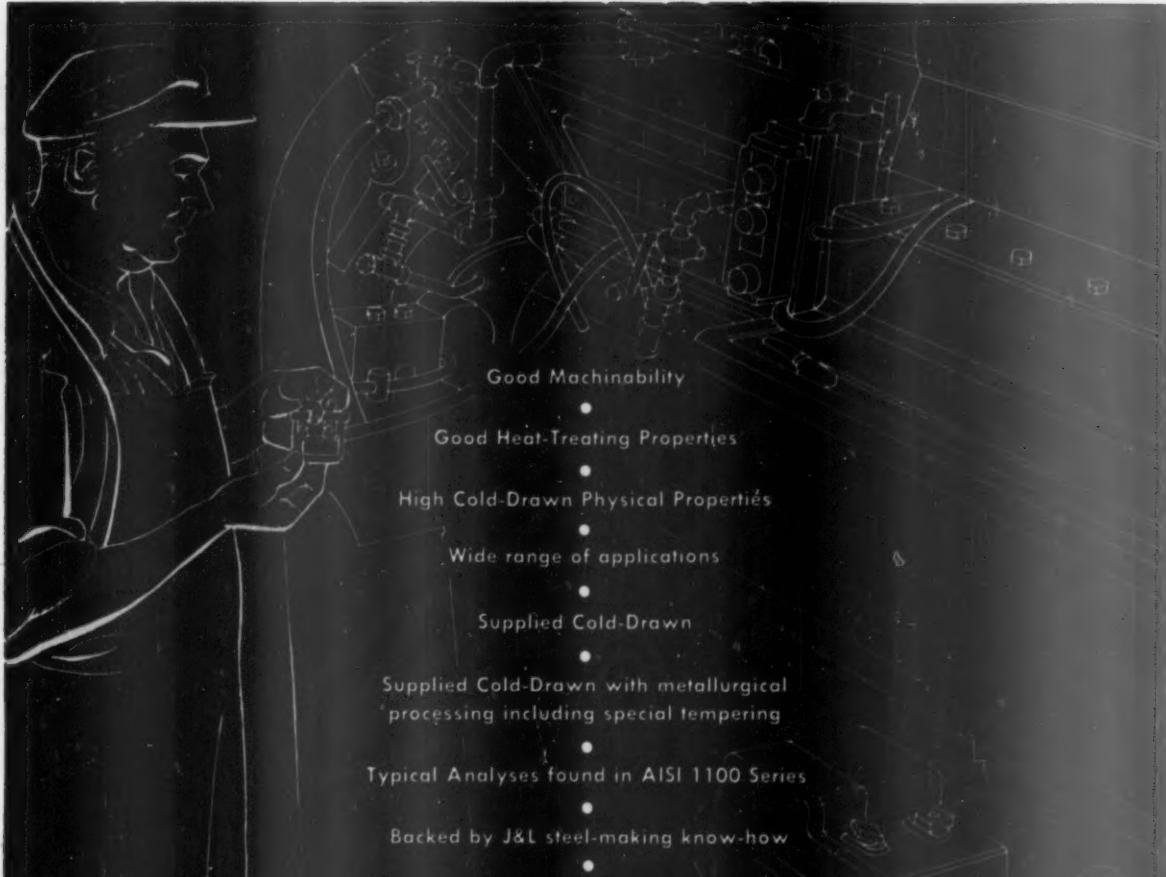
• Make-Up—Meanwhile, the old products are still making themselves useful. Here's a brief look at their roles:

**Rock salt:** In an average year, about 500,000 tons of rock salt are sold—primarily to cities, for what the cleanup people call "clean-pavement maintenance." Cities use great quantities of salt to melt the snow in a hurry and flush it into sewers. Spread thickly like that, the salt sometimes doesn't all dissolve. It leaves gravel-like crystals and a white dust that gets tracked into buildings. Another disadvantage is that its melting action slows down when the temperature is below 20F.

**Calcium chloride** sales run about 100,000 tons in an average year. It's used to keep cinders and sand from freezing, to make them spread more easily and dig into an icy surface to provide traction. It's effective in weather as cold as 20 below zero. It's sold mostly in flake form; and when you use it in sand or cinders, you don't need much more than 300 lb. to a mile of highway. Since it's used in such small amounts, according to manufacturers, its corroding effect on auto metal and tires is negligible.

Besides the flake form, which is 77.8% pure, Dow Chemical Co. produces a pellet form that's close to 100% pure calcium chloride. It's faster-acting, and similar chemically to the material the specialty houses are offering. But where Dow's anhydrous form sells for about \$5 per 100 lb., the cheapest of the new products retails at \$11.50 per 100 lb. About 5,000 tons of the trademarked products were sold last year.

• Shift—The intense promotion given the packaged ice controls has already had some tangible effect on the country's largest seller of calcium chloride, Solvay Process Division of Allied Chemical & Dye Corp. Solvay has come out with its flake calcium chloride in a 25-lb. consumer package retailing for about \$1. To help take some of the seasonal fluctuation out of the market, the company is stressing that the product has year-round uses. In summer it can be used to absorb moisture in damp basements, lay dust on tennis courts. In spring and fall, it can speed up the drying of concrete.



- Good Machinability
- Good Heat-Treating Properties
- High Cold-Drawn Physical Properties
- Wide range of applications
- Supplied Cold-Drawn
- Supplied Cold-Drawn with metallurgical processing including special tempering
- Typical Analyses found in AISI 1100 Series
- Backed by J&L steel-making know-how
- The original open hearth free-machining steel

## Let's get down to the point

You can make **better parts** with **J&L** Jalcase Cold Finished Steel

You can take advantage of Jalcase properties to produce better parts, faster, cheaper. Contact the J&L representative nearest you.



**J&L**  
**STEEL**

**JONES & LAUGHLIN STEEL CORPORATION**

PITTSBURGH

## Superior Stereo

New 3-D process of Polaroid and Technicolor uses single projector, solves synchronization problems.

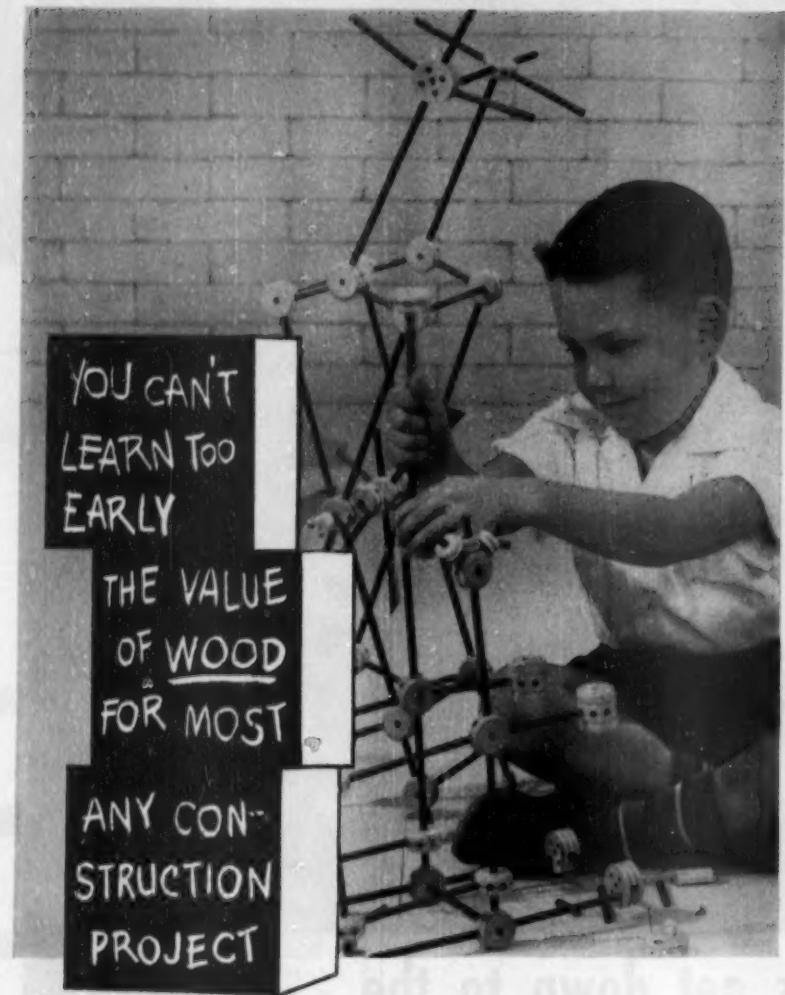
When Hollywood found itself stampeding into the third-dimension and its relatives, it looked as though the new screen techniques were the answer to the slumping box office. Then came the hitches: expensive projectors, expensive theater renovations, imperfections in film-showing techniques (BW-Jul.25'53,p60).

The most promising of the lot from the viewpoint of both costs and realistic screen effects seemed to be stereo 3-D—where two projectors put two jumbled pictures on a screen; with polarized glasses, the pictures blended into a single, three-dimensional image. But even stereo had its bugs: The bother of glasses; the fact that the movie house has to buy two new projectors specially designed for stereo. And it's quite a trick to keep the projectors synchronized—if one falls just a fraction of a second out of phase, the image blurs, causing eyestrain in the audience.

Last week it looked as if two of stereo's problems might soon be over. Two companies who have been concentrating their research in different phases of film-making announced that they had found a way to make stereo 3-D viewing optimally pleasurable. The new development—announced by Polaroid Corp., Cambridge, Mass., and Technicolor, Inc., New York—makes it possible to show 3-D pictures from a single standard 2-D projector, the kind you find in a regular movie house. You still have to wear polarized glasses, but the two other hurdles are eliminated: no more trouble with synchronization, no need for the movie house to plunk down big sums for new equipment.

For the estimated 10,000 neighborhood theaters that have never had a 3-D setup—(about two thirds of the theaters in the U.S.)—this could help bring back the customers.

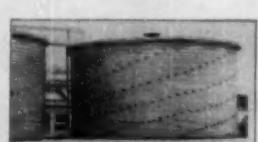
• **Polishing an Old Idea**—The new process is called Vectograph. It is simply a strip of film on which you can superimpose two color pictures. To Polaroid, there is nothing basically new about it. During World War II, Polaroid used the same idea to show 3-D pictures of the Normandy coast to military commanders who were being briefed for the Allied invasion. As with the new process, Polaroid used two cameras to take the pictures of the Normandy beaches. Then those pictures were put together, back-to-back, on a single sheet of film. The only



MOST ENGINEERS have long discovered the practicability of wood for many industrial installations. And each day, more engineers come to depend on SANTA FE, one of America's most complete facilities for the design and manufacture of industrial wood products. As specialists in wood engineering, SANTA FE can provide assistance on your most complex problem. Write today!



COOLING TOWERS • WOOD TANKS  
WOOD PIPE • CROSS ARMS



AND OTHER ENGINEERED INDUSTRIAL WOOD PRODUCTS



### SANTA FE TANK & TOWER CO.

5401 South Boyle Avenue, Los Angeles 58, California

BRANCH OFFICES IN ALL MAJOR CITIES

SINCE 1903





**LAMPS, FIXTURES, AND WIRING SUPPLIES** for any lighting need — indoors or out — can be promptly supplied by your local Graybar office or warehouse.

A single, convenient source for *everything electrical* means important automatic savings in time and purchasing department paper work.

## How BETTER LIGHTING boosts efficiency

### A New Formula for Savings — GET YOUR FREE COPY!

Typical of the helpful information available from Graybar on all kinds of electrical installations is this analysis of savings possible

through group lamp replacement. Many plants have already cut 60% or more from relamping labor costs. Send for your free copy—it will help you estimate potential savings in your plant.



- up to 10.5% more production with less spoilage.
- up to 32% reduction in accident frequency.
- up to 75% savings in lamp maintenance costs.
- 5.5% (and more) increase in clerical output.
- up to 200% annual return on lighting investments.

These are some of the proved dividends paid by careful investment in better seeing conditions. Employees work better and are less fatigued—you reap the results of increased efficiency.

As distributor of the nation's most complete selection of lamps and lighting equipment, Graybar offers you comprehensive help in planning fluorescent, incandescent, or mercury vapor systems best fitted to your needs. Impartial recommendations by Graybar Lighting Specialists are made only after careful consideration of both initial and operating costs — you can be sure of light that is properly applied and of correct intensity.

400-21

**GRAYBAR ELECTRIC CO., INC.**  
Executive Offices: Graybar Building  
New York 17, N. Y.

*Call Graybar first for...*





"Meet the  
highest priced  
filing clerk  
in the world—  
my BOSS!"

### GLOBE-WERNICKE Safeguard Filing System restored him to executive duties

**IT'S TRUE** as gospel! With the old filing set-up the Boss figured nobody could find what he wanted but himself. He was more than half right. But that's what an antiquated filing operation will do to any business. It's a lot different with Safeguard.

**G/W SAFEGUARD** Filing System is so simple even a novice can understand it—and make it work. You can't misfile papers unless you try mighty hard, because it's actually more difficult to file incorrectly than to do it right.



**YOU SAVE TIME** and motions both in filing and removing papers. You also save time and tempers for executives needing filed material. These savings are converted into cash—day in and day out.



**Engineering Specialists In**  
**Office Equipment, Systems**  
**and Visible Records**



Cincinnati 12, Ohio



# = \$

**THE EXCLUSIVE G/W Safeguard File System** costs about the same as any ordinary file system; that's **FIRST COST!** It costs so much less for operation—saves so much time, saves motions, saves frayed nerves, saves executive time—it (to use a worn phrase sincerely) pays for itself quickly, and then pays dividends to the business.



**DEPENDABLE** Globe-Wernicke dealers will survey your filing operation, make recommendations. They will demonstrate the Safeguard System to your executives, file supervisor, filing clerk, in a B-I-G or teeny business. You'll find this G/W dealer listed in your classified 'phone book under "Office Equipment." Or a line to us on your letterhead will bring you his name. Address Dept. 2-B.

differences: The Normandy pictures were stills, and they were made in black and white.

Then, when 3-D movies came along, Polaroid and Technicolor got together, discussed the idea of coupling their experiences.

• **The Process**—Under the terms of last week's agreement, the Polaroid-Technicolor teamup will work like this: Polaroid will take rolls of standard, transparent film, will coat both sides of it with a thin layer of plastic with a special grained structure. The grains on one side will run at right angles to the grains on the other.

Then Polaroid will ship that film to Technicolor. From one of the motion picture studios, Technicolor will get the color film that is to be shown in 3-D Vectograph. It will put this film through the same basic process it's been using right along in making standard motion pictures. The only differences will be in applying the film to the Vectograph strip: It will go on two sides instead of one; Technicolor will use some new dyes in processing it.

Once the color picture is on the Vectograph strip, it's ready for showing. When the theater operator gets it, he puts it in his projector, shows it as is.

• **Up in the Air**—Right now, neither company seems to know just how much Vectograph film will cost. But Polaroid says it will be close to that of film used in the standard 3-D process, which is about 11¢ per foot.

When Vectograph film will be ready is still another unanswerable question. That seems to depend on how successful the two-company technical team is in the weeks coming up.

### PRODUCTION BRIEFS

**Production of anhydrous ammonia**, the chemical that is being used so much of late in fertilizer production, has been doubled at Phillips Petroleum's center at Adams Terminal, Tex. A new 450-ton-a-day plant went into production there last week.

An asphalt refinery with a yearly capacity of more than 50-million gal. will go into production in mid-March at Hammond, Ind. Two independent producers—Byerly Corp., Cleveland, and Allied Materials Corp., Oklahoma City—have teamed up to build the \$2-million plant. They will operate it under the name Allby Asphalt & Refining Corp.

A desert proving ground in northwest Arizona is planned by Ford Motor Co. Eventually, the 4,000-acre plot will replace Ford's test station at Phoenix.

# The "Sub" that's now "first string"

RECORD-BREAKING PERFORMERS on playground or the finest hardwood courts are basketballs having covers of rubber reinforced with PLIOLITE S-6B. Extremely long wear and flex-life with a leather-like look and feel at low cost are the reasons.



HERO OF THE STORY IS PLIOLITE S-6B—a styrene-butadiene copolymer. It's used to reinforce the rubber in the basketball cover. Time was when only leather was used on balls in competitive play. All-rubber covers were confined to practice and playground balls. But came a leather shortage and a substitute had to be found. The then new, rubber reinforcing resins—such as PLIOLITE S-6B—were tried.

The result was a new kind of cover. One that

looked, felt and acted like leather, but had the wear-, water- and scuff-resistance of rubber—and was low in cost. At first it was strictly a substitute. But given the chance, it soon proved itself in every respect. Now it's on the first team to stay.

Better basketball covers are but one use of superior, simulated leather made with PLIOLITE S-6B. For many more, write to:

Goodyear, Chemical Division, Dept. M-9415-A,  
Akron 16, Ohio

CHEMICAL  
**GOOD** YEAR  
DIVISION

Chemigum, Plibond, Pliolite, Plio-Tuf, Pliovic  
—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

Use-Proved Products—CHEMIGUM • PLIBOND • PLIOLITE • PLO-TUF • PLIOVIC • WING-CHEMICALS—The Finest Chemicals for Industry

# *This is National Steel*



## **Where bottle cars help mix a molten cocktail**

It takes a lot of space to hold a steel plant, especially one as big as Great Lakes Steel, division of National Steel. Here materials must frequently be moved over considerable distances, from one part of the plant to another. This calls for speed and accuracy in material handling if all the carefully meshed steel-making operations are to be kept in balance.

An example is the giant bottle cars used on Great Lakes own private railroad. Holding more than 100 tons of molten pig iron in a single load, cars such as the artist has pictured here

transport the "hot metal" over two miles from blast furnaces to open hearth furnaces where it is combined with other materials and made into steel.

Lined with firebrick, these ingenious cars operate somewhat like a gigantic vacuum bottle and can keep their loads in a molten state for many hours if the need arises. The magnitude of this steel-making operation is emphasized by the fact that three and one-half of

these bottle cars are needed to transport the pig iron from a single tapping of one of the Great Lakes four giant blast furnaces.

Here, as in all its far-flung operations, National Steel uses the most modern methods and equipment to produce more and better steel. Completely integrated and entirely independent, National Steel continues to go forward in the vanguard of steel progress.

**NATIONAL STEEL**  
GRANT BUILDING



**CORPORATION**  
**PITTSBURGH, PA.**

**AN INDEPENDENT COMPANY OWNED BY MORE THAN 19,000 STOCKHOLDERS**

**SEVEN GREAT DIVISIONS  
WELDED INTO ONE COMPLETE  
STEEL-MAKING STRUCTURE**



**HANNA IRON ORE COMPANY**  
Cleveland, Ohio. Producer of iron ore from extensive holdings in the Great Lakes area.



**THE HANNA FURNACE CORP.**  
Buffalo, New York. Blast furnace division for production of various types of pig iron.



**GREAT LAKES STEEL CORP.**  
Detroit, Mich. A major supplier of standard and special carbon steel products for a wide range of applications in industry.



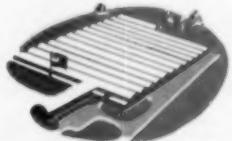
**NATIONAL MINES CORP.**  
Supplies high grade metallurgical coal for the tremendous needs of National Steel mills.



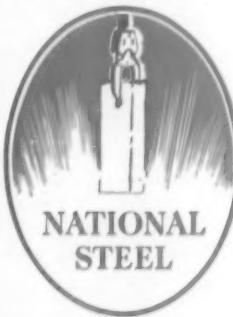
**WEIRTON STEEL COMPANY**  
Weirton, W. Va. World's largest independent manufacturer of tin plate. Producer of many other important steel products.



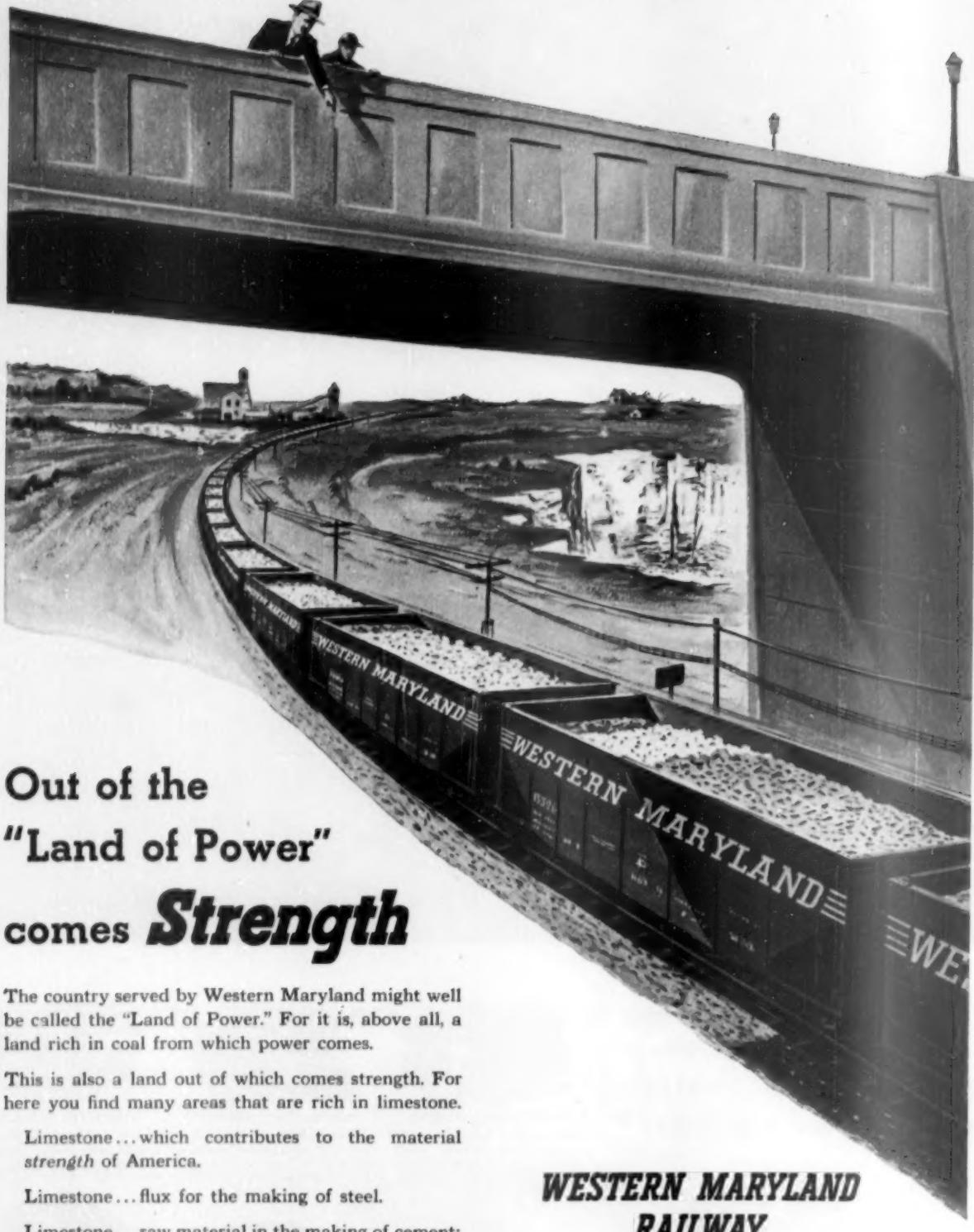
**STRAN-STEEL DIVISION**  
Ecorse, Mich. and Terre Haute, Ind. Exclusive manufacturer of famous Quonset building and Stran-Steel nailable framing.



**NATIONAL STEEL PRODUCTS CO.**  
Houston, Texas. Warehouse and distribution facilities for steel products in the Southwest.



*Plan for tomorrow—buy U.S. Savings Bonds today!*



## Out of the "Land of Power" comes **Strength**

The country served by Western Maryland might well be called the "Land of Power." For it is, above all, a land rich in coal from which power comes.

This is also a land out of which comes strength. For here you find many areas that are rich in limestone.

Limestone... which contributes to the material *strength* of America.

Limestone... flux for the making of steel.

Limestone... raw material in the making of cement; for foundations, roads and bridges.

Limestone, by the trainload, travels to steel mills and cement mills, to factories for the making of glass, carbide and other chemicals.

Limestone, like coal, is another heavy product shipped economically and in volume, via Western Maryland.

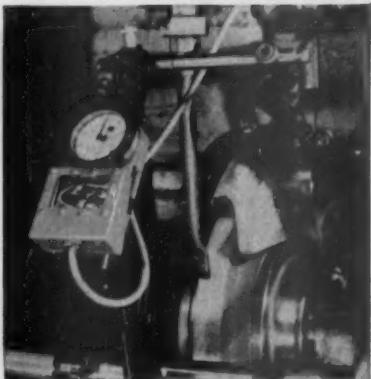
### **WESTERN MARYLAND RAILWAY**

St. Paul Place, Baltimore 2, Md.

*Important link in the movement of  
heavy traffic East and West*

The Western Maryland representative is as close as your telephone. His advice — whether you use our lines or not — may be decidedly valuable. We suggest that you call him on *any* shipping problem.

## NEW PRODUCTS



### Grinder Control

When you're grinding a piece of metal down to size, the important thing is to stop when you're within the tolerance limits. Otherwise, you have to scrap the piece, start over. Federal Products Corp. claims that its new electric grinding gauge (above), stops the grinding wheel automatically, makes it possible to maintain accuracies of 0.00005-in. over a long period.

According to the manufacturer, automatic control of the grinder begins as soon as the gauge is snapped on the work. Through a power unit, the gauge controls the grinding wheel's speed, slows it down when the diameter of the piece being ground gets to within 0.0005-in. of its final size. At that point, the wheel is switched automatically to a slower speed. When the piece reaches proper size, the wheel is retracted automatically.

• Source: Federal Products Corp., 1144 Eddy St., Providence 1, R. I.

### Dial Your Mix

If your wife had a device like General Electric's new ion resistance mass spectrometer, she could set a dial, watch her mixing bowl fill up with just the right ingredients for a top-quality cake. But GE wasn't thinking of cakes in developing the new sensing device for the gas, petroleum, pharmaceutical and chemical industries. Its job is to control the mixture in a stream of gases or light liquids. GE claims it will save money, make higher production levels possible, because the spectrometer can analyze a mixture during production—and can make the analysis in minutes, where it might take a chemist hours.

To the consumer, GE expects the spectrometer to mean better quality plastics and synthetics at lower cost—because of its wide application in the petrochemical industry. GE believes it will eventually have an effect on



H-P-M FASTRAVERSE  
Single Action Press  
with Hydraulic Ejector  
and Die Cushion

## SPECIALIZED METAL WORKING Calls for H-P-Ms

• Here, it's H-P-M's recognized experience that pays off! As the leading builder of special presses for America's ordnance industry for shell and cartridge case production, straightening gun barrels, armor plate and many other specialized metal working jobs, H-P-M's performance is a matter of record. Capitalize on H-P-M's 76 years of specialized experience . . . invite us in at the planning stage.



THE HYDRAULIC PRESS MFG. COMPANY  
MOUNT GILEAD, OHIO, U.S.A.

1000 MARION ROAD

A FEW OF THE HUNDREDS OF USERS OF  
H-P-M ALL-HYDRAULIC FASTRAVERSE PRESSES

Admiral • Allis-Chalmers • American Locomotive  
Boeing • Briggs • Budd Wheel • Buick • Douglas  
Caterpillar Tractor • Chevrolet • Chrysler • Goodrich  
Consolidated Vultee • Curtiss-Wright • Frigidaire

Ford • General Electric • Westinghouse • Goodyear  
General Motors • Reli Point • Hughes Tool • Modine  
International Harvester • J. I. Case • Western Electric  
John Deere • Lockheed • Massey-Harris • Mullins  
North American • Oldsmobile • Oliver • U. S. Steel  
Patt & Whitney • Raybestos Copper & Brass • Sargent  
Ryan • Thompson Products • U. S. Rubber • Timken

# M.&St.L.

## *Modern & Stream Lined*

The Minneapolis & St. Louis in 1953 is a completely modern Railway, staffed and equipped for its specialized job:

### *Fast Freight Service in the Great Midwest*

Under the present management, the M. & St. L. has been rebuilt, physically and financially, in the past 18 years.

#### **SOME FACTS ABOUT THE M. & ST. L.**

**Locomotives:** all the new and more efficient Diesels, 73 units.

**Freight Cars:** 4,000, nearly all new since 1944.

**New Depots, Shops and Bridges:** scores of old structures replaced.

**Major Projects:** new general office in Minneapolis and three Diesel service buildings.

**Yards and Shops:** rebuilt and modernized at Minneapolis, Marshalltown and other terminals.

**All Improvements:** paid for or being paid for from earnings.

The M. & St. L. is one of the few railroads without bonded debt. Only capital is 600,000 shares of common stock.

Since 1935, operating revenue has tripled, totaling \$22,901,000 in 1952. Employees number about 2,800. Total payroll, \$11,403,000 in 1952, nearly three times that of 1935.

Taxes totaled \$2,861,000 in 1952, paid to federal, state and local governments, equal to \$4.77 per share of stock.

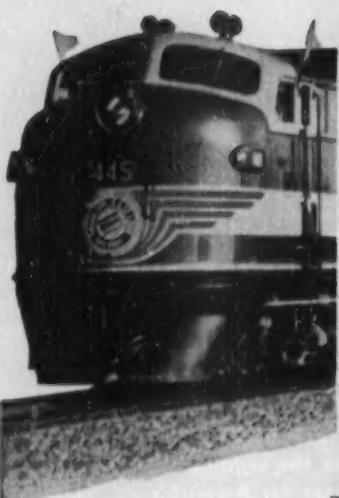
The M. & St. L. operates 1,397 miles of main track: 399 in Minnesota; 155 in South Dakota; 753 in Iowa and 89 in Illinois. Serves 225 cities and towns.

Constant program of industrial development has located several hundred new industries on M. & St. L. lines, creating additional freight traffic.

Traffic department, strongly staffed and operating 36 offices throughout the U. S., works aggressively to secure freight, including "bridge line" traffic from connecting roads as well as shipments to and from points on line.

#### **THE GOAL OF THE M. & ST. L.**

To provide ever-better Freight Service to the Communities it serves, to Agriculture, Business and Industry and to Connecting Railroads; thus contributing to Progress and Prosperity of its Midwest Territory, expanding its own Traffic and Revenues and making possible the payment of Liberal Dividends to Owners of its Stock.



**The MINNEAPOLIS & ST. LOUIS Railway**

*Modern & Stream Lined Freight Service*



quality and prices of things like motor oils and medicines.

• Source: General Electric Co., Schenectady 5, N. Y.



#### **Pocket Geiger Counter**

For the seeker of radioactive elements who doesn't want to be bothered with a lot of heavy equipment, Micro Specialties Co. is about to put this 11-oz. Geiger counter on the market. It is completely self-contained, provides either continuous or intermittent service. The manufacturer claims it's both accurate and sensitive. Price: \$20.

• Source: Cam-Mac Div., Micro Specialties Co., 1834 University Ave., Berkeley 7, Calif.



#### **Fast but Firm**

The metalworking industry has been using high-speed steel tools to do lots of jobs in the shop: planing, milling, drilling, and the like. But when it came to using these tools on band machines, such as the one shown above, there was always the problem of finding a way to heat-treat the steel band so it would be flexible enough to be useful. Also, there had to be some way to weld the

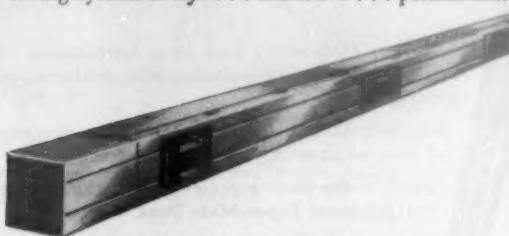
## GOODBYE — OCTOPUS



No other octopus is as dangerous as this one!

It's a source of fires . . . a cause of poor operation of appliances . . . tripping . . . a trouble-maker everywhere. What is it? . . . It's the universally misused duplex outlet with three and four-way socket plugs.

Our engineers long felt there was a better way to wire a home. So they went to work . . . came up with new, multi-outlet "Plug-In" Strip. This surface wiring system is safe . . . attractive . . . permanent.



Installed in living room, office, kitchen, workroom, it provides all the outlets you'll ever need—at 6-inch or 18-inch intervals around a room—replaces the octopus with *electrical convenience*.

"Plug-In" Strip is one more example of how National Electric is constantly searching for . . . and frequently is the first to find . . . better ways of wiring. That's the reason National Electric Products are specified by architects and electrical engineers, preferred by maintenance men, requested by electrical contractors and electricians.

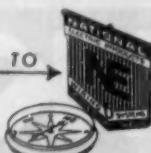
EVERYTHING IN WIRING POINTS TO →

**National Electric Products**

PITTSBURGH, PA.

3 Plants • 8 Warehouses • 34 Sales Offices

World's largest manufacturer of a complete line of electrical roughing-in materials





## DANCING BALLS help build a 30-million-dollar business

The Paper-Mate story fires your imagination—a \$1.69 item built into a 30-million-a-year business, seemingly overnight.

You can't do that with a poor product. You must be sure of your engineering, sure of your sources.

**SKSF** is the main supplier of the stainless steel balls for the points of Paper-Mate Pens.

- balls so light they dance in the vial when it is rubbed on your coat sleeve . . .
- balls that cannot be out-of-round more than ten-millionths of an inch . . .
- balls worth more per pound than ingot gold . . .

Engineering cooperation between Paper-Mate and **SKSF** helped make possible Paper-Mate's unconditional guarantee—the sort of cooperation every industry expects, and gets, from **SKSF**.

**SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.**  
— manufacturers of **SKF** and HESS-BRIGHT bearings.

**SKF**  
BALL AND ROLLER BEARINGS

steel band into a loop so it could travel in an oval path—through the machine. The steel would usually snap after a certain amount of flexure—or it would break at the weld.

Now DoAll Co. claims it has developed a high-speed steel band that meets the requirements: flexibility and weldability. And it has a new band machine to go with it. The manufacturer claims these two developments will reduce machining time, conserve material.

• Source: The DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.

### Pocket-Size Radio

Lehigh Valley Electronics claims that its radio is the smallest ever to hit the consumer market in quantity. The aerial is flexible; when you want to put the radio in your pocket, you merely wrap the aerial around the case.

The radio operates at frequencies between 30 and 50 megacycles. Its maker says it has a range of 20 mi., whether you use it indoors or out, or in a car or bus. It has three tubes, and two batteries that are supposed to do about 80 hours' work before they need replacing.

• Source: Lehigh Valley Electronics, 215 S. 3rd St., Allentown, Pa.

### NEW PRODUCTS BRIEFS

A new starting aid gives heavy duty combustion engines a faster start in cold weather, down to -65°F. It was developed by California Oil Co., Barber, N. J. The new starting unit uses a highly combustible fluid; when you start the engine, the fluid is fed into it, keeps the engine running until the temperature is high enough. Then you switch over to regular fuel.

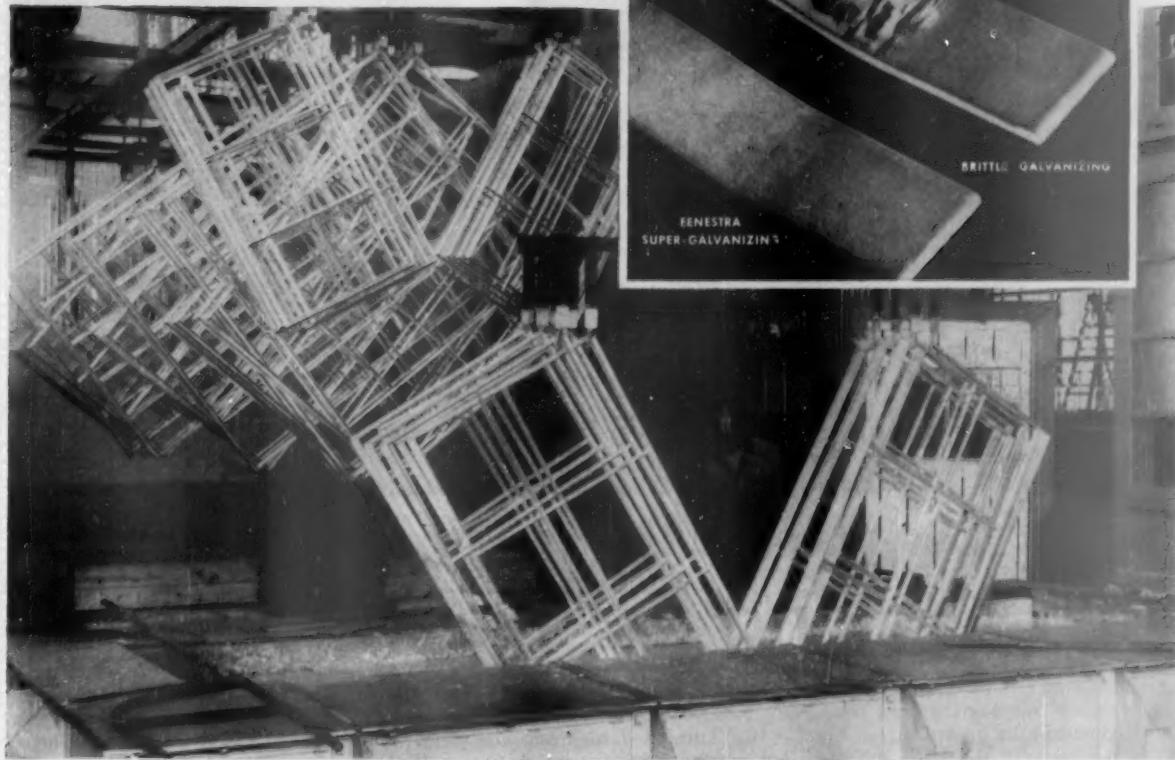
A new truck cab with the engine located between the two cab seats will be introduced soon by Twin Coach Co., Kent, Ohio. Idea is to cut down the cab and engine compartment space, make more room for payload.

An electric heating cable—designed to melt the snow off your roof before it does damage to the gutters—has been put on the market by Driver-Harris Co., Harrison, N. J. You lay it in a zigzag pattern along the eaves.

An electronic air filter has been put on the market by American Air Filter Co., Louisville, Ky. It builds up an electric charge on air particles, gives the filter itself an opposite charge. It is designed for residential use.



"A salute to those who  
made it possible" \*



Fenestra Steel Windows at one stage of Fenestra Super Hot-Dip Galvanizing.

BEND TEST shows why Fenestra Steel Windows are called Super Hot-Dip Galvanized. When two pieces of galvanized steel are bent, then straightened, some types of galvanizing crack open, leaving the steel vulnerable. The Fenestra piece stays protected.



## "Bewaren is Besparen" ...especially today!

That's the way the Dutch galvanizers say it. And "Keeping is Saving" could be the slogan for Fenestra\* Super Hot-Dip Galvanized Windows.

These strong steel windows will not only "keep"—they will save you thousands of dollars.

They cost no more than ordinary steel windows with two field coats of paint inside and out, and these windows *never need painting*. That's a saving of over \$3,600 in paint and painters

every few years, if yours is an average-sized plant. Fenestra has the only plant and equipment in America especially designed for the tricky job of window galvanizing. Check on Fenestra Super Hot-Dip Galvanized Steel Windows for that new building you're planning. Call your Fenestra representative—he's listed in the yellow pages—or write Detroit Steel Products Co., Dept. BW-1, 3425 Griffin Street, Detroit 11, Michigan. \*\*

SUPER HOT-DIP  
GALVANIZED  
STEEL WINDOWS



Your need for windows of strong material that would resist rust encouraged us to develop Fenestra Super Hot-Dip Galvanized Steel Windows—a great advancement in building products.

*Fenestra*

# ECONOMICS



ECONOMIST COLIN CLARK IS A

## Man Looking for Trouble

The man in the picture above has the distinction of being the most pessimistic economist on record about the immediate future of the U.S. and the world. He is Colin Clark, of Oxford University. Two months ago, Britain's Manchester Guardian set forecasters all over the world back on their heels with two articles by Clark on the American business outlook, titled *Dangerous Signs of the American Slump*. They were the most frankly pessimistic predictions for 1954 to be published anywhere.

In brief, Clark predicted that by mid-1954, the U.S. economy would sink to the level reached during the mild 1949 recession. Then, instead of snapping back, he warned, the economy would continue plunging downward. He foresaw 6-million to 7-million unemployed.

Clark wrote that this decline was unavoidable unless Washington acted boldly and quickly. His own prescription called for a \$20-billion cut in taxes—on excises and personal incomes—

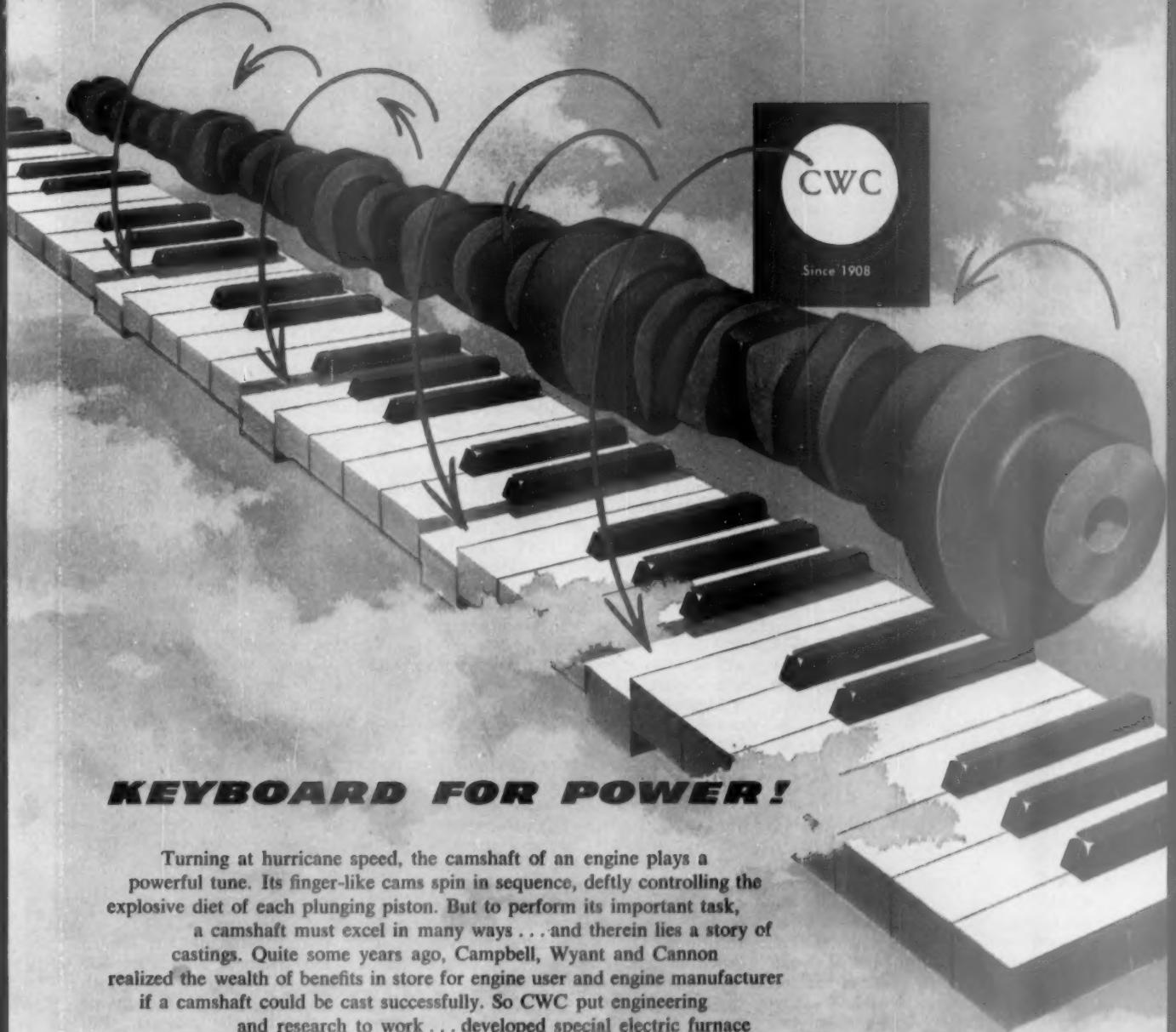
or a like amount to be made available for foreign investment.

• **Big Turnout**—Last week, the drawing power of his pessimistic point of view was demonstrated in New York's Hotel Astor, where Colin Clark appeared at the invitation of the National Industrial Conference Board. Two ballrooms had to be thrown together to accommodate the overflow crowd of businessmen and economists. According to one official, the meeting was the best attended in the NICB history.

To share the speaker's platform with Clark, the NICB had also invited W. S. Woytinsky of Johns Hopkins and Arthur F. Burns, Chairman of the Council of Economic Advisers. Burns begged off, pleading the pressure of official business. Woytinsky, as much an optimist about 1954 as Clark is a pessimist, predicted that business would enjoy a 10% rise over 1953's high levels. The crowd received this good news impatiently. It was evident the audience was mainly interested in hearing what 49-year-old Colin Clark had to say.

• **Slight Revisions**—When Clark's turn finally came, he calmly admitted that he has now raised his sights a little. For one thing, he made clear that what he had forecast was a short and sharp contraction, not a long-term depression such as we suffered in the early '30s. For another, he declared that unemployment might be kept down by a substantial reduction in the work-week. In addition, recent revisions in his calculations had led him to the conclusion that a federal budget deficit of \$2-billion a month for a short period, rather than \$20-billion over a full year, might be enough to check the decline.

But for the most part Clark stuck to his guns: The U.S. economy is poised for a substantial fall. It would be foolhardy to wait until disaster strikes. He still advised strong medicine in the form of whopping tax cuts, pointing out that a 10% increase in the money supply—equivalent to about \$20-billion—would be no more effective than a \$2.5-billion cut in excise taxes. If action is taken now, he thinks that



## **KEYBOARD FOR POWER!**

Turning at hurricane speed, the camshaft of an engine plays a powerful tune. Its finger-like cams spin in sequence, deftly controlling the explosive diet of each plunging piston. But to perform its important task, a camshaft must excel in many ways . . . and therein lies a story of castings. Quite some years ago, Campbell, Wyant and Cannon realized the wealth of benefits in store for engine user and engine manufacturer if a camshaft could be cast successfully. So CWC put engineering and research to work . . . developed special electric furnace alloys far superior to any previously used materials.

Since that time, CWC has delivered over 40 million cast camshafts . . . saved engine builders well over 50 million dollars. In addition to being produced at lower cost, these camshafts are heat treated to resist corrosion and wear for the life of the engine. They need little machining, are easier to machine and actually extend design possibilities of the engine.

It will pay to consider castings for your product. Many others have found the most important step is to contact CWC.

**CAMPBELL, WYANT AND CANNON**

**FOUNDRY COMPANY**

Muskegon, Michigan

GRAY IRON, ALLOY IRON AND STEEL CASTINGS

there is a good chance the decline can be reversed and the budget balanced.

• **Danger Signals**—To back up his predictions, Clark depends on a series of equations that, in mathematical terms, attempt to depict the workings of our economy. This mathematical model, Clark claims, has actually traced past business cycles with reasonable accuracy and has been revised to plot future conditions. According to his latest computations, a number of unfavorable conditions now exist in our economy. He cites these danger signs:

- Money supply is scarce in relation to the size of the labor force and the wages it has to be paid. In fact, Clark points out that except for 1929 and 1937, money is less abundant than at any time in the last 30 years.

- Inventories are excessive in relation to sales.

- Investment in new plant and equipment is likely to tail off.

- The high level of construction is choking off demand for new housing. Despite the sustained boom in housing, Clark believes that there is a vast untapped market that will not be reached until costs come down.

- **Chain Reaction**—Considered separately, Clark stated, none of these factors is very important. But taken together, they can have all the impact of a chain reaction on the rest of our economy. The working of his mathematical model is responsible for his view that the stock market crash in 1929 would not have been significant by itself—there were other factors that combined with the speculative boom, created the conditions for depression. Now, Clark sees some of the same conditions operating. If Congress does not raise expenditures or cut taxes, Clark definitely states that we will experience a dip deeper than the 1949 recessions, though not so severe as the drop in 1937-38.

- **A Note of Optimism**—Even though Clark's audience did not succumb to his pessimism, they were definitely impressed with his performance. For Clark is not really a prophet of doom. He made clear that whatever the immediate prospect, we would be enjoying another healthy boom within two or three years.

However, Clark made no bones about his fear that an American decline would have far-reaching economic and psychological consequences abroad. Economically, he felt that the free world would survive. But psychologically, he is not so sure. "Any sizable downturn," he said, "would be precisely the instrument the Communists need."

## I. His Record Holds

Actually, the most disturbing element in Clark's latest predictions is that his

past record for forecasting is so good. Even his critics grudgingly admit his percentage of accuracy is unusually high. They sometimes claim he uses magic. But Clark insists it is all done with a slide rule.

As far back as 1942, Clark's tinkering with mathematical models resulted in his predicting that most nations would enjoy sustained full-employment during the postwar period. At that time, Clark was almost as alone as he is now. For most economists here and abroad were forecasting a postwar slump featured by heavy unemployment.

- **Accurate**—While the war was still going on, Clark also wrote that within 20 years, both the U.S. and the Soviet Union would become large-scale importers of farm products. The latest Russian efforts to make big purchases of foods and fats in Europe and the U.S. coincides with his estimates. As for the U.S., Clark points out that we have been a net importer of farm products since 1911. He considers the current stockpile of grain and dairy products will last only temporarily, and will permanently disappear as soon as the rest of the world earns more dollars.

Many British businessmen stand in awe of Clark since the pound was devalued in September, 1949. The reason: Clark had correctly forecast the rate and date of the devaluation. Only last March he stirred up a new controversy in Britain with his prediction that the pound would again be devalued within two years unless foreign trade was set free of controls.

- **Man of Parts**—Although Clark's forecasting is making him an international figure he has long been rated as one of the world's top economic thinkers. Moreover, he is an expert in a variety of fields. Some economists consider him as the leading authority on comparative national income statistics. Others say he is the best informed man on the subjects of population and productivity, and his present job as director of the Agricultural Economics Research Institute at Oxford argues that he is an expert in agriculture.

As a matter of fact, Clark is all of these things. As such, he is straight out of the British tradition that has produced men like John Stuart Mill, Jeremy Bentham, Adam Smith, and John Maynard Keynes—men who were not merely economists but great philosophers. Like them, he is opinionated and a doctrinaire.

- **British Tradition**—Clark was born in England and educated at Oxford as a chemist. This is in line with the British tradition, for their greatest economists have studied philosophy, biology, or theology—anything but economics. As a result, they have usually been theorists rather than analysts. And in contrast to either the German or American

economists, they have always been criticized for being long on theory and short on facts.

But Clark changed all that. His chemistry training gave him good background in science, particularly in mathematics and statistics, and he led the battle to replace speculation with fact. He argued that British economics was "largely a set of theoretical exercises of doubtful validity." His work on national income statistics virtually began the study of this field in Britain. He won complete victory with his book, *National Income and Outlay*, which stimulated a vast expansion in British official statistics during World War II.

- **History Maker**—In 1937, Clark left England for Australia, where he remained for 15 years as a university lecturer and economist for the state government of Queensland. While in Australia, he continued his research, writing a number of books that added to his stature as a leading mathematical economist. His *Critique of Russian Statistics* was one of the first academic works to expose the figures published by the Kremlin as untrustworthy propaganda, and his *Conditions of Economic Progress* provided a statistical framework for measuring national economics.

- **Long-Range Predictions**—But the book that demonstrated Clark's prowess as an original thinker was *The Economics of 1960*, written in 1942. Relying on his mathematical equations, Clark made a whole series of sweeping forecasts about economic conditions covering two decades. Two years ago, he submitted these predictions to a critical review, concluding that most had come true. Then he went on to predict that the terms of trade would remain favorable to primary producers at least until 1970, and that there would be a sharp increase in international capital investment, coming from Europe as well as the U.S.

## II. Heir, But Not Disciple

One British colleague has termed Clark "the theorizer with the slide rule," and in combining fact with theory, Clark has brought something new to the British tradition. But though he has branched out on his own, he admits a big debt to three economists: A. C. Pigou, a classical economist who started Clark searching for facts; Allyn Young of Harvard, a productivity expert who doted on statistics; and John Maynard Keynes.

- **Differences**—Clark has often been considered the logical successor to Keynes, but he emphatically is not a disciple. As Clark sees it, there is a great deal of validity in Keynes' fundamental proposition that, while individual industries could regulate themselves satisfactorily, the economic



## To meet a human need...

We believe that the hands of America's workers are industry's most important tools. For this reason we are proud to introduce the **Scott Industrial Wiper**, which is successfully meeting the wide range of wiping needs in industry. It is a general-purpose, disposable wiper designed to handle your jobs safely, efficiently and economically.

A Scott man stands ready to demonstrate this product in your plant.

\*PAT. PEND.

SCOTT PAPER COMPANY, CHESTER, PENNSYLVANIA

*Another* ROCHESTER PRODUCTS

**GM** STEEL  
tubing

ENGINEERING  
ACHIEVEMENT—

SPEED AND ACCURACY are key considerations in forming serpentine coils for refrigeration condenser and evaporator units. Rochester Products achieves both with exclusive Fully Automatic Bending Equipment that forms Multiple Serpentine Coils of GM Steel Tubing in one continuous operation! Result: Faster production, greater uniformity, and LOWER COSTS.

This is one more example of how Rochester Products GM Steel Tubing engineering achievements are helping hundreds of manufacturers to build better products, faster, for less money. What about you?



ROCHESTER  
PRODUCTS

DIVISION OF GENERAL MOTORS  
ROCHESTER, N. Y., U. S. A.



## Weighfairer...

Which is just what this Pitney-Bowes Mailing Scale is! It gives fair weight, and nothing but! The automatic pendulum mechanism is fast-acting, yet extremely accurate—won't overweigh and waste postage, or underweigh and have your letters arrive "Postage Due!" The big hairline indicator gives precise decisions, never wavers. The wide-spaced markings are easy to see, save time and postage in mailing.

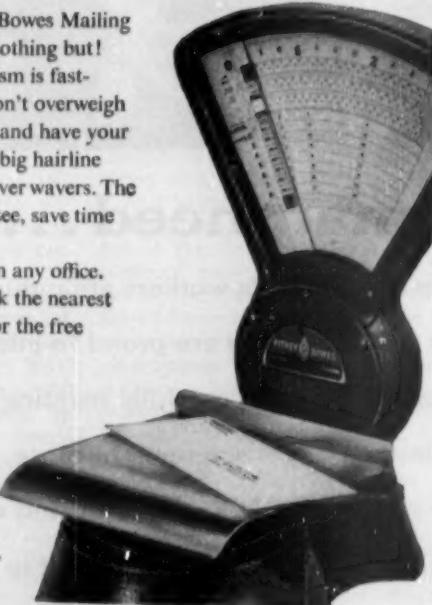
This S-103 Scale pays its way in any office. Special models for parcel post. Ask the nearest PB office to show you. Or write for the free illustrated booklet.

FREE: Handy wall chart of Postal Rates with parcel post map and zone finder.

**PITNEY-BOWES**  
**Mailing Scales**

PITNEY-BOWES, INC.  
1482 Pacific St., Stamford, Conn.

Originators of the postage meter  
...offices in 93 cities



system as a whole could not. But he believes that many of Keynes' other theories have been proved false or have been superseded. He points out that those who profess to speak for Keynes have deliberately distorted his theory. And Clark himself is more opposed to the Keynesians than to Keynes.

The American Keynesians, according to Clark, are the worst offenders. "In America," he says, "Keynes is considered a fellow-traveler. The fact is that he was always anti-Communist, and was never even close to British socialism."

• **No Politician**—Clark himself was once active in the British Labor party. But he was never a labor economist. Today he does not engage in party politics at all. That does not mean he does not get into political controversies. He is on record against any attempts to tie workers to a long-term contract, explaining that such a policy makes human beings no better than commodities. He is also opposed to any attempts to increase government employment, which he has characterized as "semi-communism."

Since taking his present post, he has urged the government to withdraw its present farm price support system. Instead, he has suggested a novel measure calling for farmers to organize co-operative insurance against "excessive" price drops.

• **Conservative Thinker**—Thus, Clark is essentially a conservative thinker. This stems from his strong religious ties. He converted to Catholicism in 1940 and ever since his economic thinking has had an ethical base. In Clark's view, the duty of the economist is to serve man, not to have man fit into an economic system. This is his ethical approach.

His ethics, incidentally, put him completely at odds with Keynes over the problem of population. Keynes was a confirmed Malthusian who believed that the world's population was multiplying to the limits of its existence. He was an ardent advocate of birth control.

Clark, on the other hand, wants no steps taken to stem the increase in the world population. Theoretically, he has sought to prove that the world can support a population of between 10-billion and 15-billion, instead of the 2.3-billion we have now. Ethically, he claims that "no economist, however wise, has the slightest right to interfere with the birth of children."

• **At Odds**—His religion and his economics also made him critical of the views of men like John Galbraith and David Lilienthal, who have stressed the virtues of bigness in our economy. He admires Galbraith for formulating the theory of countervailing power (BW—Jan. '54, p92), even though he thinks it is completely erroneous. "At least Galbraith is doing some thinking," he

said, "but in my opinion, he is traveling in the wrong direction."

Underlying his objection is his ethical conviction that maximum production is not the sole goal of society. He firmly believes that "among the most fundamental of all human rights is a man's right to pursue his vocation with the ability at his command." Thus, he is in favor of a society of "working proprietors" that is neither capitalist nor Communist.

### III. Out on a Limb

The fact that Clark stood up to be counted as a pessimist on 1954's outlook does not imply that he wants to see his forecasts come true. Nor does his own prediction of a society of independent proprietors blind him to the strength of capitalism. Clark hopes that he will be completely wrong, but he also does not deny that he takes real delight in swimming against the crowd.

In this respect, he is like Keynes, who first made his name by attacking contemporary opinion. Writing of Keynes' experience, Clark has declared that "expert opinion is never so likely to be wrong as when it seems to be unanimous."

• **Attack**—Because he is always going out on a limb, Clark is vulnerable. Despite his remarkable record for forecasting, some critics feel that his mathematical predictions are too general, permitting him to claim he was correct whatever the outcome. There are other complaints that there is too wide a margin of error in his computations. And there are many who feel that his mathematical model, complicated as it is, is both too rigid and too simple to serve as a guide to our complex and dynamic economy.

• **Defense**—Clark admits that there is some merit to all these criticisms. For example, the Dept. of Commerce statistics he uses are often hazy estimates. In particular, he singles out the figures on inventories and agriculture. These, he feels, are not his fault. He has to use them because there are no others.

He allows that the various mathematical values he gives to different economic factors may be subject to differing interpretations. But he denies that a mathematical model cannot work.

Moreover, Clark does not think much of economists who refuse to prophesy. It is his opinion that forecasting is part and parcel of the job of being an economist. He does not expect to be right all the time. But he feels that without a continuing series of informed predictions, neither governments nor businesses can operate effectively. The only way that his methods can be perfected is through actual testing. And that, Clark, with his slide rule and his theory, is doing.



**VARD** INC.  
PASADENA 8,  
CALIFORNIA

The VARD ball screw is an efficient, accurate and reliable mechanism. When combined with electric, hydraulic or pneumatic power units these ball screws provide the most efficient known means for transmitting rotary to linear motion.

Engineering inquiries for information concerning specific applications should be directed to the VARD sales department.

CUSTOM DESIGNERS AND MANUFACTURERS OF:

BALL SCREWS

MECHANICAL DRIVES



Electro-Mechanical Actuators



Double Enveloping Worms

HYDRAULIC SYSTEMS

FRACTIONAL H. P.  
MOTORS

# Who's the Boss of Chessie Now?



**BEFORE YOUNG** The Van Sweringens controlled all these railroads, hoped to weld them into a giant, unified empire.



**AFTER YOUNG** The C&O, as left by Young, has absorbed the Pere Marquette, but has lost all hold on the profitable Nickel Plate.

For years a tiny Wall Street tail has been wagging the dog of giant Chesapeake & Ohio Ry. But not any more; New York's Alleghany Corp. has sold the 1.34% stock interest with which of late it has completely dictated the fiscal comings and goings of the C&O—the nation's fourth biggest carrier in point of net and seventh biggest in gross (BW Jan. 23 '54, p32).

Right now, it's not clear who will take over the control of C&O. Some Wall Street cynics even think that behind the scenes there will be little change of master.

On the record, the big significance of the stock sale by Alleghany is the retirement of the ubiquitous Robert R. Young from his long rule of the Chessie board. Alleghany Corp. has never been anything but Robert R. Young spelled backwards, since the day in 1937 when Young and some associates paid \$3-million for control of this top holding company in the crumbling Van Sweringen rail empire.

- **Back In**—Young's resignation as Chessie chairman last week would seem to leave Alleghany out of the rail business for the first time in the Young era. But the boss quickly showed that this severance was not to last. This week Young and his associate Allan P. Kirby demanded seats on the board of the New York Central.

The original announcement of the Young-Chessie divorce left many strings untied. But Young did say that he had sold out so that he and Kirby would be "free to acquire control of another carrier." This he followed up with the statement that he and Kirby, along with Alleghany, had acquired a "substantial" interest in the Central. On the heels of this came the demand for both men to be seated on the Central board.

Young didn't say exactly how many shares of Central they own. Central officials also weren't talking; indeed, it's doubtful whether they know the answer. The nearest approach to a clue came from an Alleghany spokesman, who said that no purchase of Central stock could be considered "substantial" if it were less than 50,000 shares.

- **Premature?**—Another point that still isn't clear is the reception that Central will give to Young and Kirby. Officially, all that the railroad has to say is:

- It has advised Young that the request will be considered at the next board meeting, on Feb. 10.

- "The board may consider it premature to answer his request until such

CANDID INTERVIEW WITH WILLIAM WHITE, PRESIDENT, NEW YORK CENTRAL SYSTEM

# Mr. White, what does New York Central mean by Quality Railroad Service?



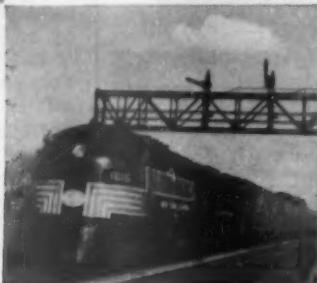
**It means a lot of things, but boiled down in a few words: It is transportation that is enjoyable, dependable and efficient. It means you can TRAVEL OR SHIP via NEW YORK CENTRAL and forget your transportation problems. If there is any worrying to do, let us do it.**



**Of course, to us railroaders, it's complex. For QUALITY RAILROAD SERVICE involves thousands of items—from courtesy to safety—from good track on the Water Level Route to maintenance of Central's 165,000 freight cars, 5,500 passenger cars, and 3,000 locomotives.**



**It calls for quality in men—men who are ready, able and willing to serve our customers right—because they know that our customers make our jobs possible. For, whether he's in the engine cab or signal tower, at the freight house or the dispatcher's desk, it's the railroader who makes the Railroad.**



**QUALITY RAILROAD SERVICE never means excuses or buck-passing when the going gets tough. It's always looking for ways to do the job as promised and expected, regardless of difficulties. Transportation WELL DONE is what we mean by QUALITY RAILROAD SERVICE on New York Central.**

# New York Central

N.Y.C. Means Q.R.S.

**Quality**  
RAILROAD SERVICE

NEW YORK  
CENTRAL  
SYSTEM

# Quit worrying about where your business will come from . . .



## USE DODGE REPORTS

The selling service that pin points best business opportunities every day for most of the leading firms and salesmen with a stake in new construction. Will more time spent in the presence of more buyers help your salesmen get more business? Then give your salesmen the time to do it . . . use Dodge Reports. This sales service can save the time your salesmen otherwise spend just trying to find out where your business is . . . gives them more time to spend with buyers having a current need for your products or service. Let us show you the way

Dodge Reports tell you where the business is coming from and give your salesmen more time to get it.

There is no obligation. We'll send you free, helpful book. Just write.

Dodge Reports are produced by a 1000 man field force strategically located to cover each local market. These are the trained men who can take the first sales step for you . . . discovering needs for your products or services.

## DODGE REPORTS

Dept. B541, 119 West 40th Street, New York 18, N.Y.  
Timely, Accurate, Construction News Service East of the Rockies  
TAKE THE FIRST STEP IN EVERY SALE



Your business insurance program courts disaster when it fails to reflect changing economic conditions.

## JOHNSON & HIGGINS

INSURANCE BROKERS — AVERAGE ADJUSTERS  
63 WALL STREET • NEW YORK 5

New York • Chicago • San Francisco • Los Angeles • Detroit • Cleveland • Philadelphia • Pittsburgh  
Buffalo • Seattle • Wilmington • Vancouver • Winnipeg • Montreal • Toronto • Havana

clues

the national classified advertising section of  
BUSINESS WEEK

see page—150

time as the legal questions within the jurisdiction of the Interstate Commerce Commission have been resolved."

Wall Street has several ideas on what this second, cryptic statement may mean.

Some cynics think that Central officials may be skeptical of the authenticity of Alleghany's sale of its 105,000 shares of Chessie stock, all that remained of the 2,585,000 shares (a 34% interest) it held when Young moved in.

• Among Friends—The latest sale, the cynics point out, was to Cyrus S. Eaton, Cleveland investment banker and an old-time pal of Young's. The deal boosted Eaton's direct and indirect holdings of C&O stock to around 250,000 shares, or 3.2%. He is now the road's biggest individual stockholder, and has already succeeded Young as chairman of the board.

Another school of Wall Street thought feels that the Central is chiefly concerned with the 12.4% interest in Central common stock (around 800,000 shares) that Chessie bought while Young was running the show. Because of that holding, the Central once offered two seats on its 15-man board to Young in his capacity as C&O chairman. That deal was quickly squashed by the ICC, which ruled that the two roads were competing carriers and must remain at arm's length. Chessie was forced to hand over the voting power of its shares to New York's Chase National Bank, as voting trustee.

In the present juncture, Eaton has indicated that C&O will hang on to its Central stock. He calls the shares a "good investment," with "great possibilities for the future in all phases."

To Wall Street, that sounds like Young talking. But Streeters don't think that the C&O holding will be much help to Young in his quest for seats on the Central board—unless the ICC makes a radical change in its earlier ruling. They feel that Young will have to find his backing among other Central stockholders.

• A Fighter—It's hard to say how Young would make out in a proxy fight with the Central management. In the past, he has shown himself to be a master of domination via shoestring control, an adroit publicist who can win support of the little stockholder, and, above all, a real fighter.

In the Street, he probably has more enemies than friends. But even most of the enemies don't underrate him in a fight.

Still, one group has some reservations on his battling prowess. It argues that his past triumphs have come because the opposition was overly dignified. This group admits that behind-the-scenes moves can help, but it maintains that the only way to beat Young is to step down out of the ivory tower and slug it

out in the middle of the market place.

These same doubters also question whether Young is as much the "hero of the masses" as formerly. They point to the many costly mistakes that he has made in postwar years. Notably, they question his handling of the Alleghany portfolio at times, and his management of the old Van Sweringen rail empire.

Young's biggest railroading blunder, the doubters say, was his insistence that Chessie could be built into a passenger carrier, despite its geographical status. A close second, they say, was his sudden decision to shrink the Chessie family (maps, page 90) by getting rid of control of the New York, Chicago & St. Louis (Nickel Plate), which promptly became one of the most flourishing and profitable of carriers.

• **Passenger Venture**—An outsider can't calculate the cost of Young's determination to convert Chessie into a passenger, as well as a freight, carrier. You can get a hint, though, in the operations bill for a single year. In 1947, C&O gross passenger revenues were only \$12-million, or 3.8% of the road's gross. Yet the passenger operations in that year lost \$20-million, or \$1.10 on each share of common stock then outstanding.

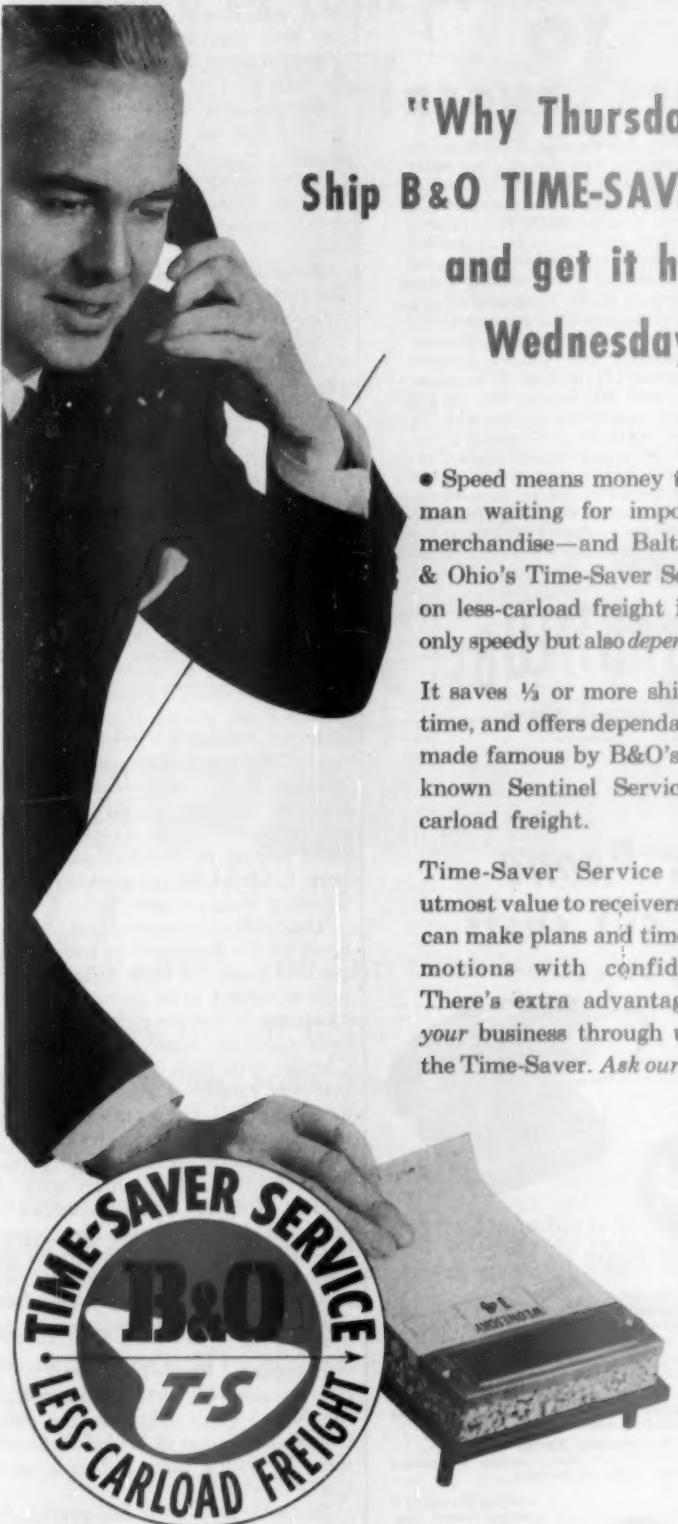
This costly program came at a time when Young also O.K.'d heavy spending on new freight equipment, for expanding lines into new coal areas, and for improving existing mileage. All this after years in which most earnings had been paid out as dividends, and in which Young had sunk some \$7.6-million of Chessie cash in a 6.2% block of New York Central stock, and another \$12-million in the Greenbrier hotel. Not to mention that, in 1948, Chessie was nickel for some \$6.6-million in back income taxes.

• **Minus**—The combined effect of all this was that, by mid-1948, the road's current assets fell \$5.6-million short of covering current liabilities. Three years before, Chessie had \$49.2-million of working capital. The situation reached a point where the road began financing equipment purchases almost 100% with equipment trust issues, instead of borrowing the normal 80%.

This break with tradition proved too costly. The road was soon forced to sell \$40-million of new bonds, one of the few new-money rail offerings since the war.

Ultimately, Young faced up to the fact that Chessie wasn't good passenger material. But dropping his innovations could not immediately cut the losses. Selling off the equipment that Young had ordered but couldn't use is reported to have meant bargain rates, and heavy losses.

These misadventures didn't bust Chessie, which was and is a magnificent freight carrier. Last year earnings



## "Why Thursday?

**Ship B&O TIME-SAVER,  
and get it here  
Wednesday!"**

• Speed means money to the man waiting for important merchandise—and Baltimore & Ohio's Time-Saver Service on less-carload freight is not only speedy but also *dependable*.

It saves  $\frac{1}{2}$  or more shipping time, and offers dependability made famous by B&O's well-known Sentinel Service for carload freight.

Time-Saver Service is of utmost value to receivers, who can make plans and time promotions with confidence. There's extra advantage for your business through use of the Time-Saver. Ask our man!

**Baltimore & Ohio Railroad**

Constantly doing things—better!

# LUBRICATES 10 TIMES LONGER!

That's the way the record reads in one cost-conscious New Jersey plant using amazing new PLASTILUBE instead of conventional grease. But *everywhere* in America; in mills making steel, rubber, paper, flour, plastics, etc. for an increasingly competitive market, modern industry is cutting costs, reducing inventory, keeping better house and solving many old and new lubrication problems with this new non-melting, non-freezing, water-resistant, multi-purpose "successor to grease". If you'd like better lubrication, with less down-time, longer lubricant and equipment life, why not write us today? When it comes to multi-purpose lubricants our engineers and authorized distributors are years ahead not only in know-how but in know-where, when and what, as well. They'll be glad to put this unique experience at your disposal. The Warren Refining & Chemical Co., Dept. BW-1, Cleveland 15, Ohio.



**This Phone  
can cut costs  
for you...**



Autophone Systems

CUT COSTS BY:

**Eliminating Delays**  
Immediate contact between all phones... free of switch-board delays.

**Eliminating Call-Backs**  
Incoming calls for information can be answered without necessity of calling back.

**Eliminating Non-Business Calls**  
Where outside contact is not necessary Couch phones provide interoffice service only.

**Eliminating Unnecessary Rental Phones**  
Privately owned Couch phones replace unnecessary rental phones... eliminate their cost.

Write for Catalog 52 E  
covering systems from  
2 to 50 lines.

**E.H. Couch Company, Inc.**  
NORTH QUINCY 71,  
MASSACHUSETTS

reached record heights, with a boost from temporary tax savings via accelerated amortization. But rail students say this comeback is no feather in Young's cap. They give the credit to Walter J. Tuohy, who took over as operating head in 1948, with a reported proviso that he would be the real boss or else.

Some scars remain. Rightly or wrongly, Chessie common has lost much of its blue-chip shine since the war.

• **Empire Dream**—The original Van Sweringen dream had been to weld Chessie and the lines it controlled into a unified empire rivaling the big eastern trunk lines. Young seemed to share the dream in his first years as successor to the Vans. Indeed, he was almost in a position to make it a reality, when the ICC finally approved the Chessie's absorption of all the roads it controlled directly or indirectly. That included the Pere Marquette, the Nickel Plate, and the Wheeling & Lake Erie, which was controlled by the Nickel Plate.

With the cup almost at his lips soon after World War II, Young made a slip. Pere Marquette stockholders had docilely agreed to accept C&O shares for their holdings. But the holders of Nickel Plate preferred—with arrears of dividends totaling \$85.50 piled up since the mid-1930s—decided that Young's terms were too niggardly. They pointed not only to the arrears, but to the carrier's bright prospects, and to the fact that its financial position had been bolstered by the plowing back of excellent wartime earnings.

The preferred stockholders were also upset by the treatment of the common stock. Each of their shares was to receive around \$136 in new securities, compared to \$48 for each share of common—most of which was owned by Chessie. The preferred people thought this was rough, in the light of their long sacrifices. Even outsiders thought that Young was rubbing it in.

For whatever reason, Young made little effort to compromise with the Nickel Plate dissidents. Instead, he predicted that the Nickel Plate, operating on its own, would have trouble paying more than \$6 on its preferred. And he threatened to seek a merger with other roads, if the Chessie-family deal didn't work out.

• **Dropping a Road**—In the end, he decided to push his merger plans without the Nickel Plate. He then got rid of Chessie's holdings of Nickel Plate common, by doling them out as a special C&O dividend.

Since then, Chessie has proved that it can operate profitably without the Nickel Plate. But Nickel Plate has proved even more dramatically that Young is not infallible. The road has turned into one of the biggest postwar

winners. Back dividends on the preferred have long since been retired and recent annual earnings have run around \$50 a share on the senior issue. On the common, quarterly dividends have run at the same 75¢ rate as Chessie's.

If Chessie stockholders held on to their Nickel Plate dividend (1/40th of a share for each share of Chessie) they would not have been hurt by Young's sudden dumping of the stock. But it's a big question how many did hold on, especially in view of Young's dismal reports on the prospects of Nickel Plate preferred.

An added irony is that Moody's Investor Service last week suggested that its clients might do well to shift from Chessie common to Nickel Plate common. Said Moody's: "Because of its larger per share earnings and its stronger working-capital position, we believe that the Nickel Plate common dividend is sufficiently better protected to make such a switch worth-while."

## Treasury Bills Point To Lower Money Cost

Money market experts say that the rate the Treasury has to pay for short-term borrowing is the best indicator of nearby trends in interest costs.

If they are right, the outlook is that the recent downtrend in money rates will continue, and perhaps even broaden out. This week the Treasury's short-term borrowing costs hit their lowest point since July, 1949. On Monday, one of the usual weekly offerings of \$1.5-billion in 91-day bills was disposed of at an interest cost that averaged a slight fraction under 1%.

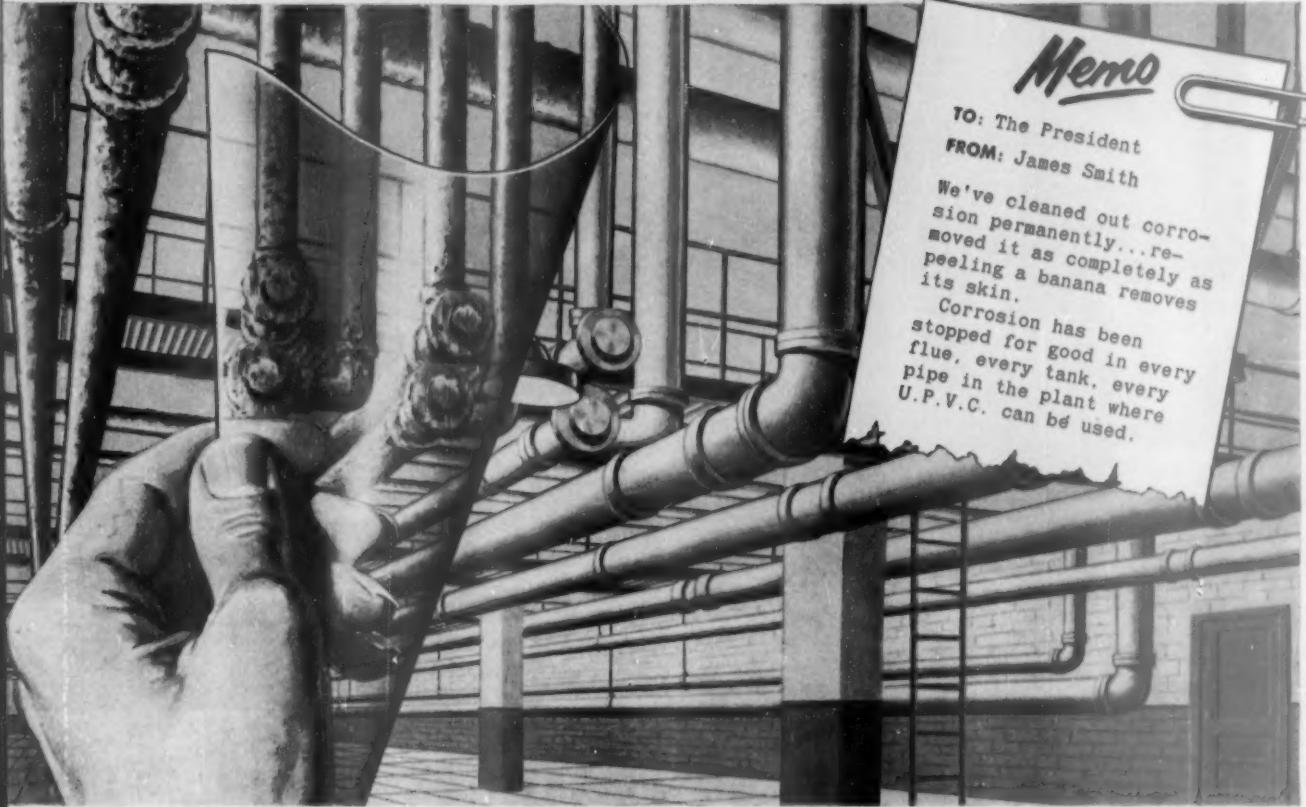
That cost is more than 20 basis points below a similar offering the week before. And it's a country mile from the price the Treasury had to pay six months ago. In late spring, at the height of the 1953 money squeeze, one weekly offering cost the Treasury 2.416%.

The Treasury ascribes this week's four-and-a-half-year low to "the large supply of funds . . . [currently] . . . available for short-term investment." This supply, the Treasury says, is due largely to the seasonal repayment of bank loans, plus a demand for new bank credit that for some time has been much weaker than it was a year ago.

The Treasury bill rate has won its position of a money market barometer because history has shown over the years that it is more sensitive than any other rate to the supply and demand of lendable funds. On two points it has invariably been first:

• When tight money conditions are on the horizon, the Treasury bill

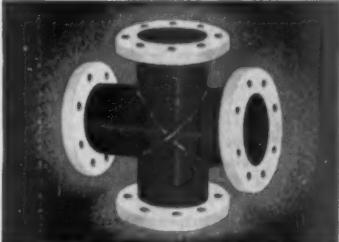
# Can you sign this memo to your president?



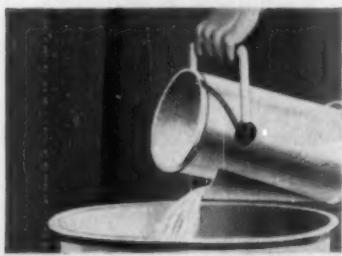
*Most certainly!.. WHEN YOU END CORROSION*

WITH UNPLASTICIZED P.V.C.

MADE FROM FIRESTONE EXON 402-A



Industrial Pipe extruded from Unplasticized P.V.C. made from EXON 402-A is resistant to all types of corrosion. It is extremely light weight in comparison to metal...easier and less expensive to handle.



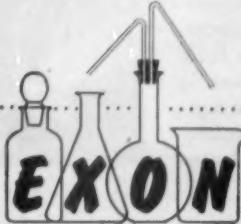
Implements—Pitchers, scoops, stirrers of Unplasticized P.V.C. made from EXON 402-A are invaluable in handling corrosive materials. They are extremely light...easy to handle...practically eliminates replacement due to corrosion.

Wherever Unplasticized P.V.C. made from EXON 402-A has been properly used, it has made corrosion a memory. In industrial applications, it outperforms customary metals—yet it costs less to install and to handle.

Unplasticized P.V.C. is light, rigid, extremely versatile—can be welded, sawed, sheared, stamped, milled, planed, drilled, embossed, rolled and cemented—on conventional woodworking or metalworking equipment.

Whatever your business or your problem, you're most likely to find your answer to corrosion in an Unplasticized P.V.C. installation. Proper use of this material of course, is necessary for maximum results. For details of interest to you, call or write:

**Firestone**



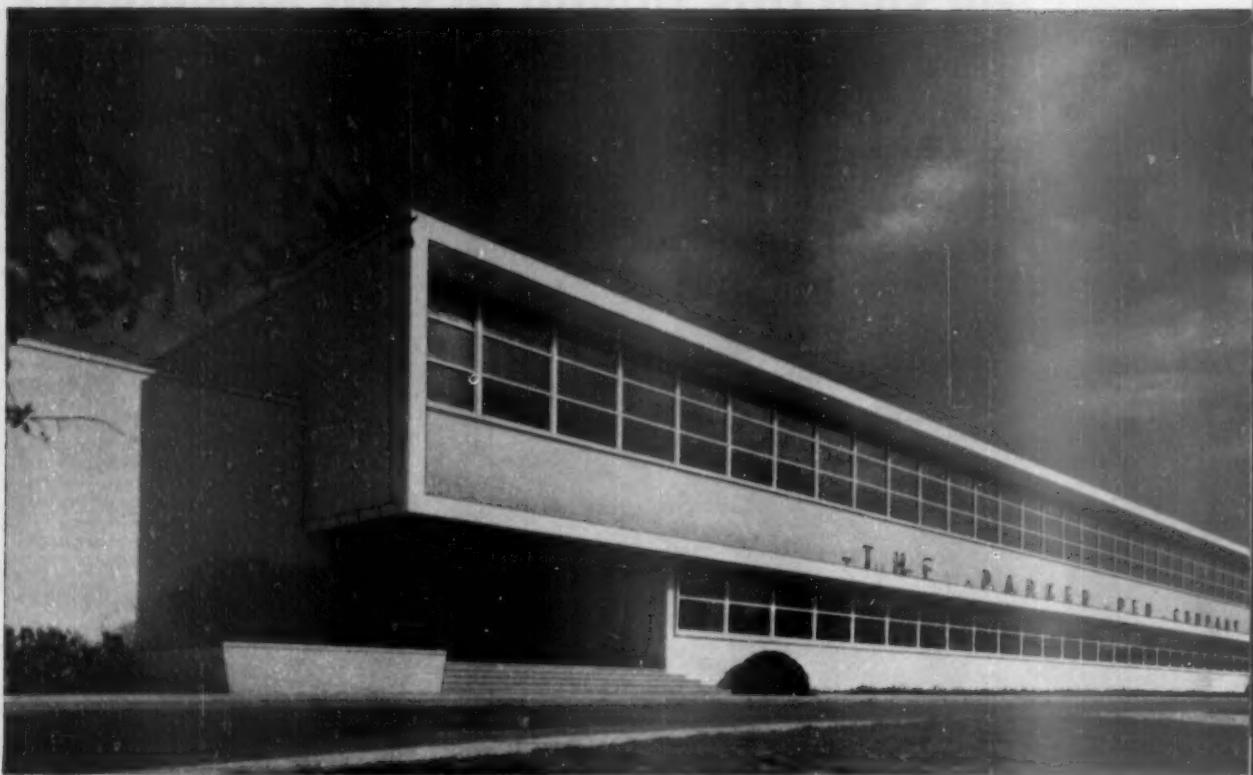
**Chemical Sales Division**

FIRESTONE PLASTICS COMPANY, DEPT. B11

POTTSTOWN, PENNSYLVANIA

A Division of The Firestone Tire & Rubber Co.

• NOTE: Firestone supplies the resin only, does not manufacture the end product.



The Parker Pen Company's new Arrow Park plant at Janesville, Wis. Architects: John J. Plad & Associates, Madison, Wis.  
Mechanical Engineers: Beling Engineering Consultants, Moline, Ill. Heating Contractors: Hyland Hall Co., Madison, Wis.

*How Honeywell Customized Temperature Control can help you*

## Learn about your business – from a pen manufacturer

*Why Honeywell Customized Temperature Control is becoming a must for all types of buildings*

"Working climate," as important to the success of your business as black ink in the ledger, is made up of a lot of things.

The handling of personnel, proper lighting, vacations with pay, temperature and humidity control are a few of them.

And the best way to provide proper temperature control is through use of *Honeywell Customized Temperature Control*.

The key word here is "customized." It means that whatever your control requirements, a Honeywell Customized Temperature Control installation, designed to fit the needs of your building and its occupants is your answer. This applies not only to heating and cooling, ventilation and humidity control, but it applies to industrial con-

trol as well. Only Honeywell can provide true "customized" control. Because only Honeywell manufactures all three types of controls—pneumatic, electric and electronic—which often must be integrated in a single building to give you the right performance.

The story, in capsule form, of the Honeywell Customized Temperature Control installation in Parker Pen's new plant in Janesville, Wisconsin, is told by the floor plan and picture captions opposite. They tell how specific occupancy, use and exposure problems were met—to provide an ideal "working climate."

The techniques used, applied to your particular problems, can help you attain the kind of "working climate" you've always wanted for your business.

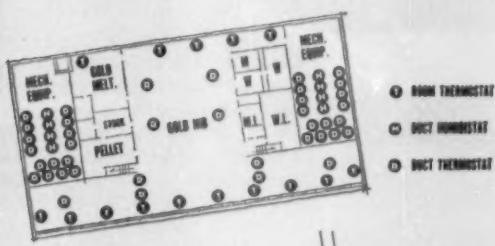


*For comfortable, even temperature in new or existing buildings—of any size—use Honeywell Customized Temperature Control*

Whether it's a factory, office, motel, airport, hospital, apartment, church, school, store, garage—or any size building—new or existing, Honeywell Customized Temperature Control can help meet your heating, ventilating, air conditioning and industrial control problems.

You will not only enjoy more comfort and efficiency, you'll save fuel, too.

For full facts on Customized Temperature Control, call your architect, heating engineer or local Honeywell office. Or mail the coupon.



SECOND FLOOR PLAN



*Philip Hull, manufacturing vice-president, the Parker Pen Company, says*

"When we planned our new Janesville plant we wanted it to be the best plant of its kind ever built. Certainly the ideal indoor climate Honeywell Customized Temperature Control helps provide has aided us in approaching that goal."



# Honeywell



*First in Controls*

104 OFFICES ACROSS THE NATION



*Strategically located thermostats guard the comfort of workers in the large engineering and process room. Sunshine entering through the big windows could upset the comfort balance in summer as well as in winter—if Honeywell Customized Temperature Control weren't on the job controlling both heating and cooling.*



*"Working Climate" problems are different here. The room is huge; physically more active workers find their best room temperature is lower than in the engineering room. But Honeywell Customized Temperature Control—with thermostats strategically located in the area—easily handles this occupancy and use problem, at the same time compensating for different exposure problems.*

\*\*\*\*\*  
MINNEAPOLIS-HONEYWELL REGULATOR CO.  
Dept. BW-1-19 Minneapolis 8, Minnesota

Gentlemen:

I'm interested in learning more about Honeywell Customized Temperature Control.

Name \_\_\_\_\_

Firm Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



Misericordia Hospital, Milwaukee, Wis. Brust & Brust, Architects.  
E. Steigerwald and Sons, General Contractor.



Beauty is combined with utility in this attractive installation of Mississippi Structural Corrugated Glass in this unusual hospital. Sparkling, translucent, light diffusing glass attains a lasting modern decor. Glass never requires painting, never wears out, always looks new. And interiors appear larger, brighter and friendlier with Mississippi's famous "borrowed light" that floods adjoining areas with copious quantities of softened illumination. Yet Structural Corrugated Glass by Mississippi protects privacy completely. Cleanliness, so important in a hospital, is especially easy to maintain. Having no pores to hold and absorb dirt, glass walls wipe clean with a damp cloth. Beautiful figured glass by Mississippi is the modern material...so extremely practical for every type of interior.



**Make light a part of your plans. Specify glass by Mississippi and add greater beauty plus utility. It is available in a wide variety of patterns and surface finishes "visioneered" to distribute light to best advantage.**

Write today for free catalog. Samples on request.

**MISSISSIPPI** *Glass* COMPANY

88 ANGELICA ST. SAINT LOUIS 7, MO.  
NEW YORK • CHICAGO • FULLERTON, CALIF.

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS



rate has always been the first to rise.

• When lendable funds have shown signs of catching up with demand, it has always been the first to sag.

## FINANCE BRIEFS

Major tax-exempt issues due on the market in the next two months or so include \$200-million of bonds that may be offered simultaneously by the Pennsylvania Turnpike Commission and the New Jersey Turnpike Authority. Of the batch, \$170-million would be Pennsylvania bonds, and \$30-million New Jersey. In the negotiation stage: the \$200-million Massachusetts Turnpike Authority issue and a \$315-million New York Power Authority issue.

General Motors Acceptance Corp. has lowered the interest rates it pays for money it borrows on commercial paper for the second time in a fortnight. The new rates range from 11% for 30- to 89-day notes to 2½% for 9-month notes. Previously the range was 17% to 24%. Other big finance companies are expected to post similar reductions.

**Big Loss:** Niagara Share Corp., investment company, sold its block of \$1.3-million 6% notes of Carthage Hydrocol, Inc., for \$4,000 in 1953—recovering less than 5% on the original investment. Carthage's postwar \$38-million synthetic gas plant at Brownsville, Tex., closed last June; a Standard of Indiana subsidiary may get the plant by assuming a \$17.5-million RFC loan (BW-Oct. 24 '53, p32).

National Presto Industries, Inc., maker of pressure cookers, outboard motors, and other items, is transferring its civilian production from Eau Claire, Wis., to Jackson, Miss. The company says the move will gain up to a 33% reduction in costs on its products. The Eau Claire plants will be used solely for defense work, which totals \$30-million.

Over 90% of 234,152 outstanding common shares of Russell-Miller Milling Co. stock have been tendered to F. H. Peavey & Co. for purchase at the Peavey price of \$36 a share. Peavey recently acquired control of R-M, the nation's fourth largest flour miller.

Penn Fruit Co., Inc., stockholders last week approved a financing plan for a warehouse and service center under construction in northeast Philadelphia. Under the plan, five senior officers of the company will finance the project through companies they own or control, and lease the property back to Penn Fruit on a long-term basis.

NORTH AMERICAN HAS BUILT MORE AIRPLANES THAN ANY OTHER COMPANY IN THE WORLD

# MACH



# BUSTER!

First of the true tri-sonic fighters, the new F-100 Super Sabre exceeds Mach 1 in normal, level flight... flying faster than the speed of sound.

MACH (pronounced "mock") is a term you'll be seeing more and more since it is the only really accurate way of evaluating jet plane speeds.

The need for this special standard of measurement is due to the fact that the speed of sound varies with changes in temperature and altitude.

At sea level, for instance, sound travels at speeds ranging from 735 MPH at an air temperature of 60° to 800 MPH at 100°.

However, using the Mach numbers, a jet traveling at Mach 1 is flying at the speed of sound, no matter at what altitude or temperature.

Far advanced beyond any fighter now in production, the F-100 Super Sabre was designed and built by North American to meet our nation's need.

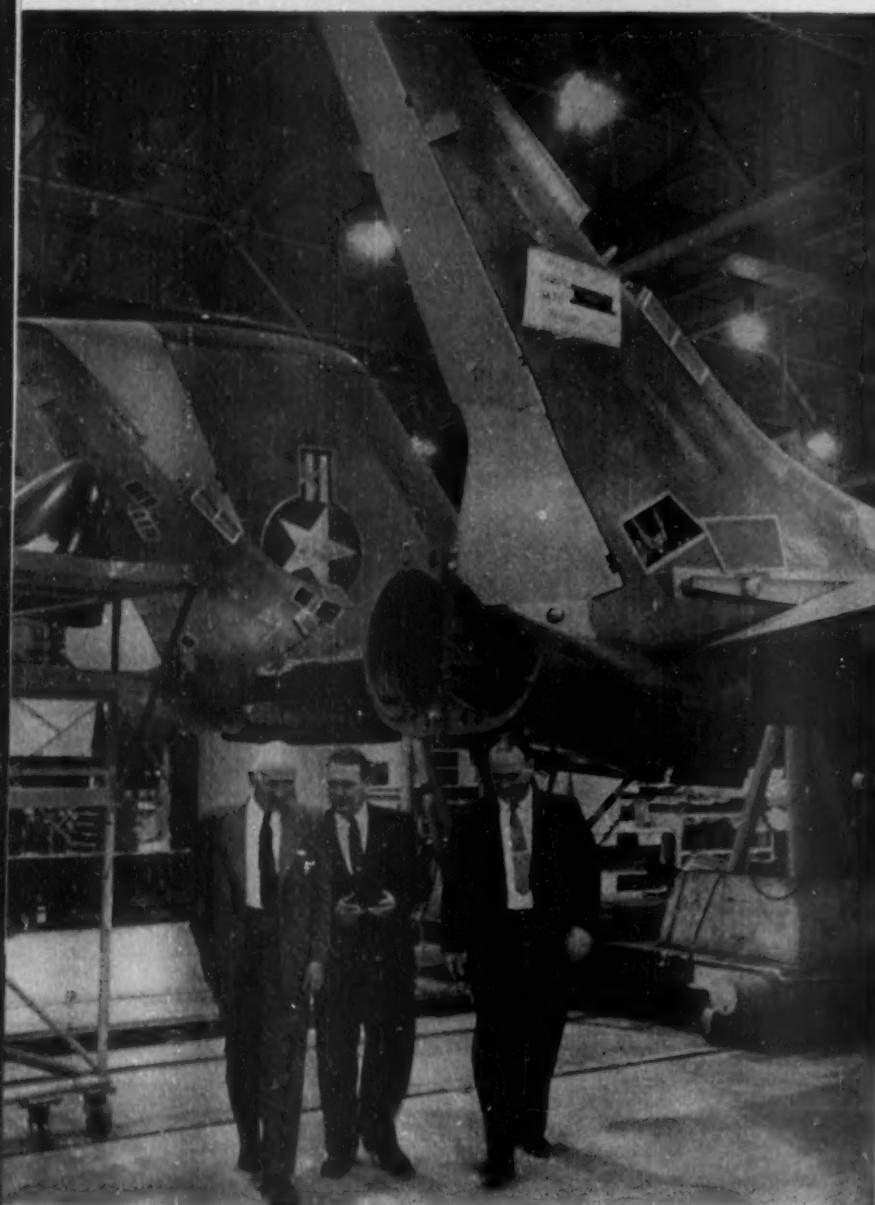
Engineers of vision... men who appreciate a challenge, are wanted at North American. If you are an engineer looking to the future, write North American, Los Angeles 45, California.

Organization, Facilities and Experience Keep

## North American Aviation, Inc.

Years Ahead in aircraft... guided missiles... electronics... atomic energy... research and development

# MANAGEMENT



ON THEIR OWN. H. B. Sallada (left), F. O. Detweiler, president (center), and C. E. Burt are among those who will steer an independent Chance Vought. They are . . .

## Flying Solo Now

Once in a while a big corporation will find that the operations of one of its divisions are hamstringing the activities of another. That's most likely to happen if one branch of the company is competing with the customers of other branches. A situation like that spells trouble, and it may mean a company can't get the most out of any of the divisions.

That's the spot that United Aircraft Corp. has been in for several years.

Navy airframe contractors such as Grumman Aircraft Engineering Corp., Douglas Aircraft Co., Inc., and McDonnell Aircraft Corp. buy engines, propellers, and accessories from two UAC divisions in Connecticut—Pratt & Whitney Aircraft and Hamilton Standard. But another UAC division, Chance Vought Aircraft, of Dallas, is in the airframe business, competing directly with Grumman and the rest for Navy orders.

Component manufacturers such as



Detweiler of Chance Vought . . .



. . . taking off . . .



. . . to spin out . . .



. . . of United Aircraft

## *air conditioning*

**helps attract 4 million customers  
to new big-city shopping center**

In metropolitan Chicago is a new and dramatic example of retail selling geared to the automobile—the Evergreen Plaza Shopping Center. Four million people turned up during the first twenty weeks to shop in the comfort provided by Carrier air conditioning at such famous stores as The Fair, Lytton's and Carson Pirie Scott & Company. Each has the type which best meets its needs. Particularly newsworthy is the air conditioning at The Fair. Here air is distributed by a high-velocity, small-duct system especially suitable for department stores. These small ducts save space, and higher pressure permits air flow to



**first name in air conditioning**

be easily adjusted to meet the changing physical requirements of the store, without affecting the performance of the rest of the system. • Whether you plan to air condition a multi-million-dollar shopping center or a small store—a large factory or towering office building—you'll find Carrier able to meet the most exacting requirements. • There is *more* Carrier air conditioning serving *more* people and *more* purposes than any other make. Carrier people founded the air conditioning business over 50 years ago. All this experience is yours to command. Look for Carrier in your Classified Telephone Directory. Or write to: Carrier Corporation, Syracuse, New York.



**When they look  
at their watches...  
TAKE A LOOK AT  
THEIR CHAIRS!**

**Keep Your Meetings Alert,  
Productive with  
Better Conference Seating**

You can avoid fidgeting, loss of attention and other signs of "conference lag" with the Cosco Conference Chair. For here is a chair designed by seating engineers to reduce fatigue and increase efficiency.

You sit on a saddle-shaped seat cushioned with foam rubber, your back supported by a contour backrest curved two ways. You are comfortable, alert, ready to do business.

The Conference Chair's extended legs prevent wall marring. All steel construction, rugged upholstery, powderized baked-on enamel finish in a choice of smart colors assure you of long service, lasting beauty.

Cosco chairs are perfect for conference rooms, reception rooms and private offices. Find out how better seating can help you get more work done. Mail the coupon today.

**Hamilton Manufacturing Corporation  
Columbus, Indiana**

**COSCO Office  
Chairs**



Left: Model 15-F  
Secretarial Chair,  
\$29.95  
(\$31.00 in Zone 2)



Right: Model 18-STA  
Executive Posture  
Chair, \$50.00  
(\$52.00 in Zone 2)  
*Other models  
also available*

**BETTER SEATING means BETTER WORK**

**COSCO CONFERENCE  
ARMCHAIR  
Model 20-LA**

**\$27.50\***  
only



\*\$28.50 in Florida, Texas and  
11 Western States (Zone 2)

Available in Canada, and other  
world markets through authorized Cosco dealers

**Please attach coupon to your letterhead—**

COSCO Office Chairs, Dept. BW-1  
Hamilton Manufacturing Corporation  
Columbus, Indiana

Yes, I would like to have complete information about better office seating. I am especially interested in:  
Secretarial Chairs  Executive Chairs   
Conference Chairs

**Firm.....**

**By.....**

**Address.....**

**City..... Zone... State.....**

P&WA and Ham Standard have to work closely with their customers. And so there was always the danger that confidential information about the planes of the airframe manufacturers would leak back—inadvertently or not—to the other member of the UAC family, Chance Vought.

The result: Vought's competitors who buy from P&WA or Ham Standard have been uneasy about taking their suppliers into their confidence. At the same time, Vought's outside engine sources, principally Westinghouse and GM's Allison division, have been cautious with Vought for fear secrets might get back to P&WA.

• **Spinoff**—In December, UAC management decided that someone had to go. It announced the beginnings of a spin-off to make the Chance Vought division a separate, independent corporation. A spinoff is an old technique made usable in an increased number of circumstances by a 1951 change in the federal income tax laws (BW—Oct. 27'51,p154).

The first step in the Vought spinoff has already taken place. On Jan. 1, the division became Chance Vought Aircraft, Inc., a separate corporation but a subsidiary of UAC. Frederick O. Detweiler, 42, general manager of the former division, became president.

Chance Vought Aircraft, Inc., took over the assets and liabilities of the business in Dallas. In exchange, UAC received the new subsidiary's stock. In April, UAC stockholders will vote on completing the spinoff. With their OK, Chance Vought—probably around Sept. 1—will drop its subsidiary status and become independent. Shares of Vought common will go to UAC stockholders on a pro rata basis.

UAC has obtained a ruling from the Internal Revenue Service that this distribution of Vought common to its stockholders will not constitute income and, therefore, will be tax-free.

Now there are three UAC executives on Vought's six-man board. When the spinoff is completed, UAC president H. M. "Jack" Horner, who is now Vought's chairman, and the other two UAC members will drop off the board.

• **Pioneering**—Chance Vought has been on its own before, but that was back in the days when 150 mph. was fast. The company was organized in 1917 by Chance Milton Vought, an early pilot who made a two-place training plane, the VE-7 in his plant on Long Island.

In 1927, Vought got a Navy contract to build the O2U-1, a two-place observation-fighter biplane. This was the first Corsair. It was flown from heavy cruisers and also from the first aircraft carriers. For engines, Chance Vought turned to Pratt & Whitney Aircraft, which had been organized in East Hartford, Conn., in 1925, by Frederick



General Contractor:  
Knutson Constr. Co.,  
Minneapolis  
Roofer: Nees Brothers,  
Minneapolis

aluminum flashing  
and coping

5-ply built-up  
asphalt gutter

APPLICATION  
1. 2-ply 30# asphalt felt  
2. 1-ply drip-mopped  
3. 1-ply solid mopped  
4. 2 strips  $\frac{1}{2} \times 2\frac{1}{2}$  high  
5. 2" FOAMGLAS

APPLICATION  
1. 1-ply 30# asphalt felt  
2. Strips  $\frac{1}{2} \times 2\frac{1}{2}$  high  
3. 3-ply 15# felt  
4. Aluminum roof

## 18,000 Gopher fans made "rain" until field house roof was insulated with **FOAMGLAS**

Large crowds in the University of Minnesota Field House used to be crackerjack "rainmakers." How?... They generated so much humidity that the original insulation on the roof became water-soaked. Then there was nothing to prevent condensation from forming on a cold underside of the roof deck. "Rain" literally fell in the field house. During a basketball game, for example, play had to be stopped frequently to mop up the floor.

FOAMGLAS, the cellular glass insulation was picked to solve this problem in 1948. It hasn't rained since. The sealed glass cells of FOAMGLAS can not absorb moisture, assuring constantly high insulating performance despite the high humidity inside and the frequently extreme outside temperatures in the Minneapolis area. The roof curvature was no problem with easily handled blocks of FOAMGLAS, readily shaped and fitted where necessary and with

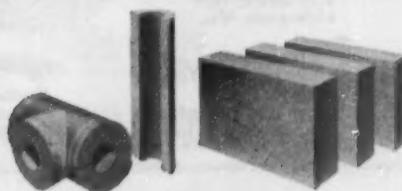
sufficient strength and rigidity to permit easy, efficient application to the roof.

Whatever your insulating problems may be, FOAMGLAS is the ideal answer. This strong, stay-dry insulation guarantees efficient insulating service plus unique design advantages. Let us send you our new booklets describing the use of FOAMGLAS to insulate roofs, walls, floors, ceilings, piping or equipment in normal or low temperature buildings. Write to Dept. F-14 PC.

PITTSBURGH CORNING CORPORATION • One Gateway Center • Pittsburgh 22, Pa.

# FOAMGLAS®

*the cellular, stay-dry insulation*



Pittsburgh Corning  
also makes  
PC Glass Blocks



## WHAT'S NEW IN SHIPPING CONTAINERS?

Not long ago you'd have shipped metal screws, nails, nuts and bolts in old fashioned kegs. Today you can ship them safer, cheaper, easier . . . in Fort Wayne's new award winning Keg-Lok corrugated container. Washing machines, pottery, furnaces and refrigerators used to travel in unwieldy crates and boxes, but now they go first class in lighter, stronger, more protective Fort Wayne containers. It's a Fort Wayne function . . . bringing new economy, eye appeal, safety and packing efficiency to shippers who hadn't realized they could use corrugated.

Maybe you could save money, reduce damage claims, step up shipping efficiency with new Fort Wayne containers . . . and it's easy to find out. Just call your nearest Fort Wayne representative. You'll get prompt co-operation.

### CORRUGATED FIBRE BOXES CORRUGATED PAPER PRODUCTS

*Fort Wayne*  
**CORRUGATED PAPER COMPANY**  
GENERAL OFFICES • FORT WAYNE 1, INDIANA

#### Sales Offices:

Chicago, Ill.  
Peoria, Ill.  
Hartford City, Ind.  
Indianapolis, Ind.  
Muncie, Ind.  
Vincennes, Ind.  
Washington, Ind.  
Jackson, Mich.  
Jersey City, N.J.  
Buffalo, N.Y.  
Jamestown, N.Y.  
New York, N.Y.  
Rochester, N.Y.  
Syracuse, N.Y.  
Utica, N.Y.

Akron, Ohio  
Cincinnati, Ohio  
Cleveland, Ohio  
Columbus, Ohio  
Dayton, Ohio  
Lima, Ohio  
Harrisburg, Penna.  
Pittsburgh, Penna.  
Winchester, Va.  
Milwaukee, Wis.

#### Plants:

Rochester, New York  
Chicago, Illinois  
Pittsburgh, Pennsylvania  
Hartford City, Indiana



#### Affiliates:

Southern Paperboard  
Corporation  
Port Wentworth, Georgia

B. Rentschler—now UAC chairman.

• **Giant Merger**—The Wasp and Hornet engines developed at P&WA were the most revolutionary aircraft power plants of their time, and Fred Rentschler started looking for airframe manufacturers to tie up with so he could insure a market for them. In 1928 he merged with Chance Vought and Bill Boeing, his two principal customers, to form United Aircraft & Transport Corp. Included in the package, then or later: Chance Vought, Pratt & Whitney, Hamilton Standard, Sikorsky Aviation, Boeing Air Transport, Boeing Airplane, Pacific Air Transport, Northrop, Stearman.

Chance Vought died in 1930 at the age of 40. Then, in 1934, the air-mail investigations shook the entire air industry; afterward, United was broken into three parts: United Aircraft, United Air Lines and Boeing Airplane Co. In the shuffle, Vought, P&WA, Sikorsky, Ham Standard and Northrop were dealt to UAC, and all but Northrop—which went on its own—became divisions.

• **War and Postwar**—In 1939, the Vought plant was moved to Stratford, Conn., and was swept into the super-boom years of World War II. Vought concentrated on Navy equipment. It built a new Corsair, the F4U-1.

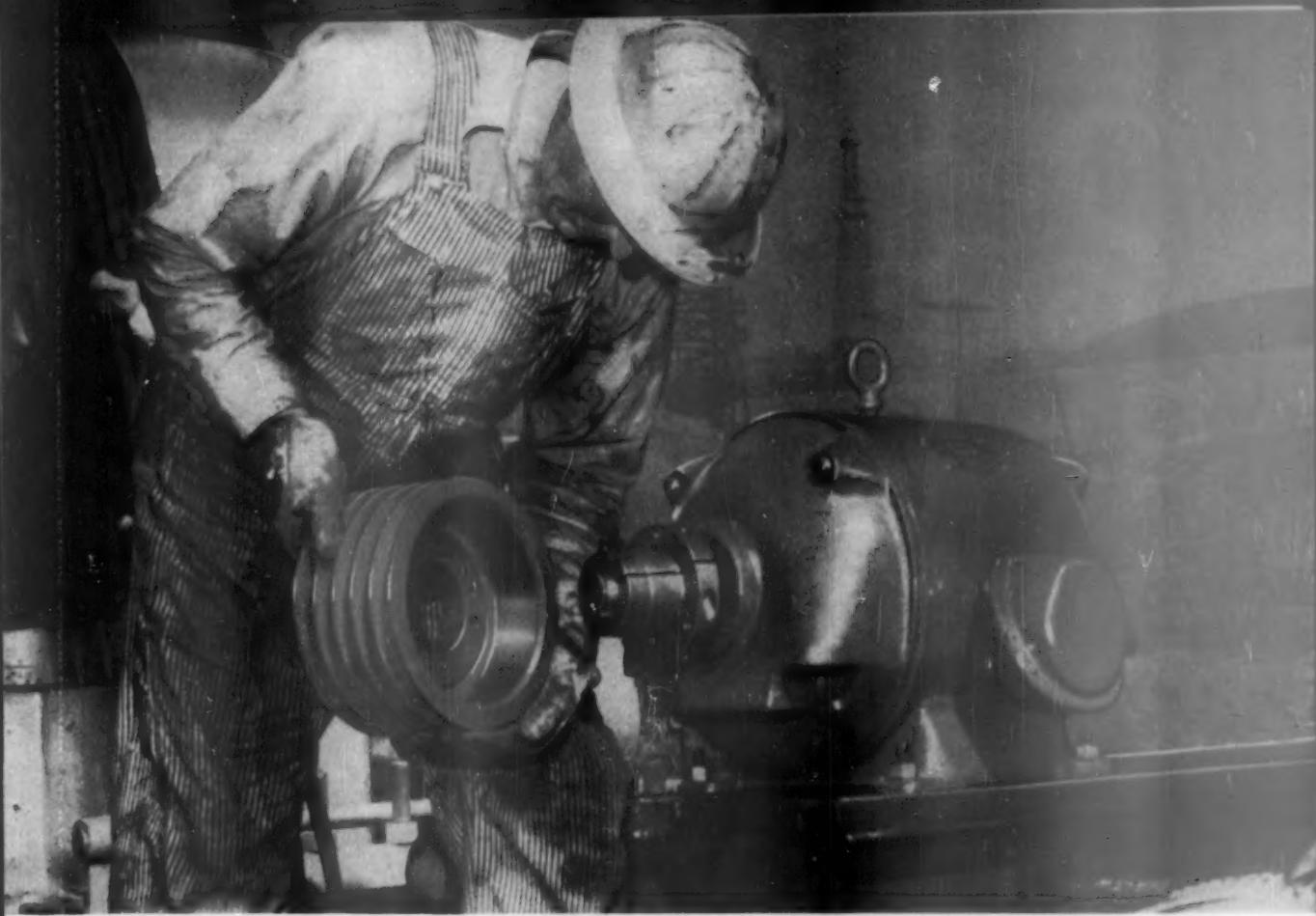
After World War II, the aircraft industry began converting to meet the jet age, and Vought found its facilities at Stratford limited. UAC decided to move Vought to Texas—probably the largest industrial move in U.S. history—into a reserve Navy plant. Vought still rents the plant from the Navy, although it has added \$8.7-million in equipment and facilities. The fact of this rental makes the stated worth of the Vought property (\$17-million in net assets) deceptively low.

• **Jet Jinx**—UAC was a slow starter in the jet age but it was hardly the company's fault. P&WA was kept busy improving the Wasp engine while General Electric and Westinghouse experimented with jet power plants (BW Jun. 30 '51, p72), and Vought was tied up making Corsairs.

After the war, Vought got going on jets. It had some success with the Flying Pancake F5U, a vertical rising fighter, but the Navy stopped development on this in 1948. (Today, both Lockheed and Convair are building vertical takeoff fighters for the Navy.)

Vought appeared to be breaking into the clear when the Navy accepted its F7U Cutlass, which first flew in 1947. This fighter was of radical high-speed design, and in line with what was then Navy thinking, it used two low-power jet engines instead of one large one. The Cutlass was finally equipped with the Westinghouse J-46 turbojet.

But just when Vought was moving to Dallas, the Navy decided the Cutlass



**IMPORTANT LINK IN MECHANICAL POWER TRANSMISSION** is the Worthington QD Sheave. Now used by all industry, the QD was developed by Worthington for the oil fields where tight shaft grip and quick detachability of sheaves are essential.

## How industry learned a lesson in the oil fields

It's hard to think of a tougher proving ground for machinery than the oil fields. Heavy shock loads and corrosion really give machine parts a workout. Take sheaves, for example. They used to be a big problem to oil men.

If the sheave was tight enough on the shaft to absorb all the shock loads, it was usually hard to get off when clutch or pump repairs were necessary. And if the sheaves came off easily, chances are they weren't on tight enough to withstand the loads.

To solve this problem, Worthington designed and developed the first sheave with a tapered, split hub. It was easy to get on, easy to get off, yet gripped the shaft tightly. Today, 15 years later, Worthington's QD (Quick Detachable) is the most widely used sheave in the world — the accepted standard for all industry.

Worthington's outstanding developments in mechanical power transmission — QD sheaves, Allspeed Drives and Worthington-Goodyear V-belts — sometimes come as a surprise to people who think Worthington makes only pumps. But for more than 100 years, Worthington has been supplying industry with many types of machinery — construction equipment, air conditioning and refrigeration apparatus, compressors, power generating and public works equipment, as well as pumps.

So whether you're air conditioning a baby's nursery, speeding a superhighway to completion, or equipping a hydroelectric plant, it will pay you to get in touch with Worthington. You'll find that the tremendously varied Worthington line of machinery is built to meet your most exacting service requirements. Write us. Worthington Corporation, Section 3.12, Harrison, New Jersey.

3-12

# WORTHINGTON



THE SIGN OF VALUE AROUND THE WORLD

AIR CONDITIONING AND REFRIGERATION • COMPRESSORS • CONSTRUCTION EQUIPMENT • ENGINES • GENERATORS • INDUSTRIAL MIXERS • LIQUID METERS  
MECHANICAL POWER TRANSMISSION • PUMPS • STEAM CONDENSERS • STEAM-JET EJECTORS • STEAM TURBINES • WATER TREATMENT APPARATUS • WELDING POSITIONERS

# Have you checked



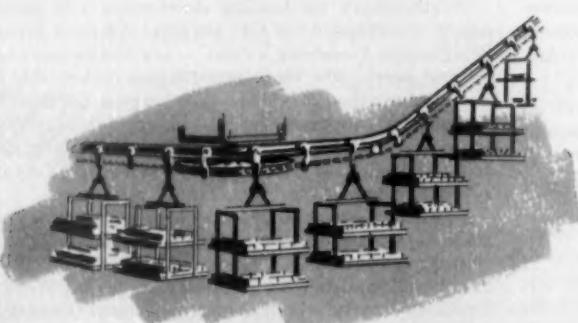
**YOUR  
PRODUCTION  
SYSTEM**

## for hardening of the arteries?

Sluggish, out-of-date, ineffective manufacturing can be downright disastrous in the coming battle for business. Better find the way right now to revitalize your production methods for low-cost, high quality manufacture.

That's where you can use our experience and our capacity for teaming imagination and practicality to achieve amazing results. We've been planning, engineering and building mechanized production systems for the best of 'em since 1919.

Let us help you move ahead into the leader's spot in your industry. Call in the MHS engineer NOW!



### Mechanical Handling Systems Inc.



4610 Nancy Ave., Detroit 12, Michigan

Offices in Principal Cities

In Canada: Canadian Mechanical Handling Systems Ltd., Windsor and Toronto

was too heavy. This necessitated removal of 7,000 lb. of electronic gear. The production halt placed Vought in a fix. Orders for Corsairs were running out. In early 1950, Jack Horner and other UAC brass went to Dallas to talk over the fate of the division.

Then things started popping in Korea, and Vought's fortunes improved. But continuing trouble with the Cutlass meant that most of the division's business came from dwindling Corsair sales and subcontracting. In early 1952, the last Corsair left the Dallas plant. It was number 12,571.

• **Present Position**—This week, with the new corporation but a month old, the hard luck Cutlass is still in trouble. In fact, not one Cutlass has yet been delivered to the Navy. The trouble is basic: Westinghouse is still perfecting the J-46 engine and isn't delivering enough of them.

Early this month, the Navy ordered Vought to cut back production of the Cutlass. This meant a layoff of about 2,500 workers.

At the moment, Vought is following five lines: (1) production, by fits and starts, of the Cutlass, now due to be phased out this year; (2) production of A2U, a land-based version of the Cutlass, which will be made for the Marines until 1956; (3) subcontracting work on B-47 nose sections and P2V tail sections; (4) production and research of guided missiles for the Navy; (5) development of the XF8U-1, a fighter that got the nod in last year's Navy Day competition.

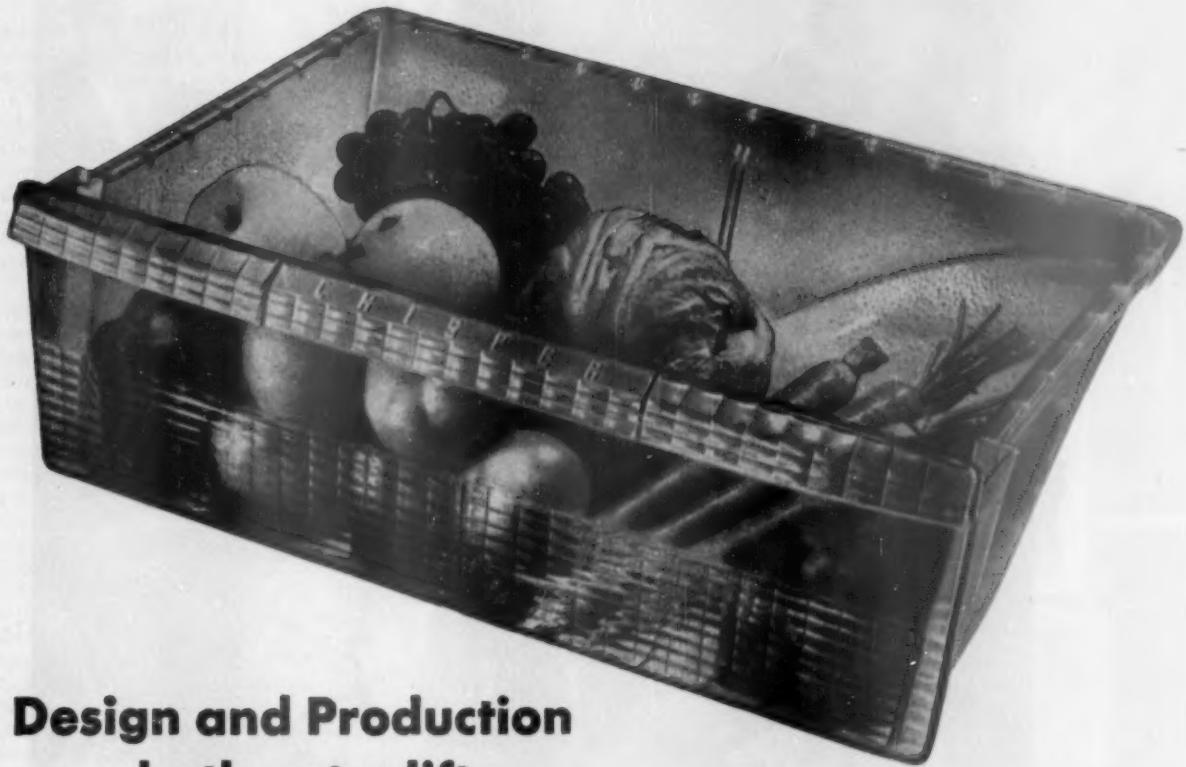
Last year, this varied program brought Vought over \$100-million in sales. On top of that, at the time the spinoff plans were announced, Vought had a \$375-million backlog of contracts and letters of intent.

• **Out of Wraps**—UAC brass has long believed that Vought must be on its own to survive and to grow. Jack Horner says, "Operating independently, they will be on an equal status with their competitors."

To the industry, this means that Vought will be able to shed the Navy cape that UAC and division management has kept it wrapped in since its founding. The rest of UAC, which before World War II had been principally Navy suppliers, finished the war principally with Army business. This is now Air Force business, a far bigger thing over-all than Navy business.

P&WA, supplying both the Air Force and the Navy, is now in a good position. When the Navy turned down its J-57 engine in favor of the slow-coming Westinghouse J-46, P&WA sold it to the Air Force.

There are no signs of it yet, but when he's airborne, it may turn out that Fred Detweiler has the same sort of diversification ideas in mind.



## Design and Production both get a lift with BAKELITE Styrene Plastics

Molding by  
General Electric Co., Decatur, Ill.

Housewives like this vegetable crisper because it's so roomy—all one piece, wide as the refrigerator. It holds a lot of garden produce, yet weighs only 45 ounces by itself. A cool, transparent, blue-green color and cleanly molded details enhance its functional design.

Even a unit as large and intricate as this is easy to mold with BAKELITE Styrene Plastics. From the great variety of these materials, the molder can select the one that's exactly right for the job. In this case, switching to BAKELITE Polystyrene BMS3-03A-1582 Blue Green stepped up production 13 per cent. The molding pressure was

reduced 600 psi. because of the free-flowing nature of the material.

Examples like this show how to increase product appeal—improve design and performance—with BAKELITE Styrene Plastics. These molding materials offer a limitless range of colors—transparent, translucent, and opaque. They are light in weight. Their molded surfaces have a high gloss, are easy to keep clean, resist food acids, soaps, and detergents.

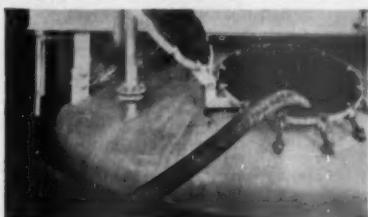
Write Dept. TN-61 for information on BAKELITE Styrene Plastics that may help you to restyle your products to increase sales.

**BAKELITE**  
TRADE-MARK  
**STYRENE PLASTICS**

—  
**BAKELITE COMPANY**  
TRADE MARK

A Division of  
**Union Carbide and Carbon Corporation**

**UCC**  
30 East 42nd Street, New York 17, N. Y.  
In Canada: Bakelite Company  
A Division of Union Carbide Canada Limited  
Belleville, Ontario



**PROTECTION FOR ANTIBIOTICS** is achieved by coating fermentation tank interiors with finishes based on BAKELITE Phenolic Resins. They keep metal from contaminating organisms, permit easier cleaning. Made by Lithcote Corp., Chicago, Ill., for The Upjohn Co., Kalamazoo, Mich.



**REINFORCED PLASTIC** fume vent stack, made from BAKELITE Polyester Resins and glass fibers, is 77 feet high, light in weight, easily assembled, structurally strong. It resists corrosion and weather, cutting maintenance. Made by The Chemical Corp., Springfield, Mass.



**FLY CASTING** with spinning tackle is easy with new taper coated with plastics based on BAKELITE Vinyl Dispersion Resins. Coating keeps line flexible, increases wearing qualities. Plastics by Stanley Chemical Co., East Berlin, Conn., for Sunset Line & Twine Co., Petaluma, Calif.



YOUNG PRESIDENTS get a taste of schoolwork in an accelerated, six-day course at Harvard's Business School.

## Experiments in Executive Schooling



BELL EXECUTIVES get the same treatment in the company's own school.

What can a modern executive learn by going back to school? How do you teach it to him?

Last week, two experiments were going on in efforts to add more information on both questions.

• **New England**—At Harvard's Business School, a group of 85 company presidents—all members of the Young Presidents Organization (BW—Apr. 5 '52, p82)—spent six days on the campus attending an intensified, cut-down version of the school's Advanced Management Program (top picture, page 108). Each of the 85 men heads a company that grosses at least \$1-million a year.

YPO sold Harvard on the idea of playing host as a sort of experiment for both parties. The young presidents wanted to find out whether to recom-

mend such a course to others in YPO or to their subordinates. Harvard wanted to find out if such an accelerated course—its regular course lasts 13 weeks—was worth packaging.

• **Too Sure**—Prof. Ralph M. Hower, who handled about two-thirds of YPO's classes, was almost ready to take a vacation when Saturday, the final day of school, rolled around. By comparison with the 13-week course, the six-day course barely allowed him time to whip the class into shape.

And, from his point of view, it took some whipping. On the first day, he says, the young business leaders neither listened to the professor nor to each other. They wanted to run the school. As he puts it: "They were accustomed to handing out aspirins to solve problems. They are self-made men—and much too sure. They brought quick answers to class. They were so accustomed to quick answers without thinking that they didn't face the real problems."

On the second day, he says, they started hogging the floor. By the third day, Wednesday, the professor was forced to step in and, in his own words, "spank the class." He chided the men for their superficiality, their cock-sure attitude, and their penchant for argument. Afterward, one president said he'd never had such a rebuke except from his wife, while another confessed he had been so busy raising his arm and preparing his own answer that he never listened to what the other men were saying.

The professor concedes that by Thursday, the fourth day, the class began "to generate more light and less heat." Sizing up the progress, he says that the YPO group "seemed to develop a little faster than the 13-week group." He praises them for their hard work, not only in class but during study hours.

The problem, of course, was adapting the presidents to the case method of instruction. "They wanted answers," the professor says. But in the case method a student discovers lessons for himself; the teacher is a guide, and no more than that.

Says Hower, "These presidents, at first, wanted to deal with symptoms and not with the problems behind the symptoms. They wanted a quick surgical operation."

• **Appraisal**—Whether Harvard will repeat the experiment is strictly conjecture, for the present.

As for the YPO's appraisal of the course, final word won't be in for about six weeks. But at the course's end, the presidents unanimously agreed the seminar was worth their time and effort—and 93% said they wanted other such programs sponsored by YPO.

This week Dean Donald K. David

## "CASE" HISTORIES FROM ATLAS PLYWOOD'S SHIPPING CONTAINER CLINIC

(Safe-Transit Certified)

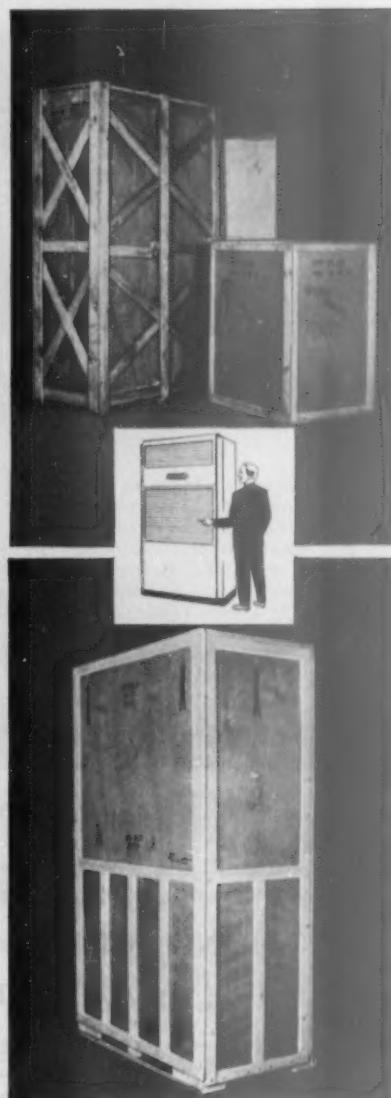
Single new Atlas Plywood case replaces three old cases . . . provides greater protection in transit . . . saves multiple handlings and storage space for manufacturer and distributors

## THIS CASE WASTED MONEY

These three packages, received some time ago at the Atlas Plywood Shipping Container Clinic, contained the three parts of a Unitaire Conditioner\*. The chassis, covered by a paper envelope, was in the large open crate. The long side panels were in a carton and the front, back and top panels in a fibre box. A cross-piece on the crate was broken and one side of the fibre box was punctured.

## THIS CASE SAVED MONEY

Atlas Plywood recommended shipping the air conditioner completely assembled in this single plywood case. Cutting down the shipping units from three to one saves many handlings by manufacturer and distributors, and reduces storage space requirements. The new Atlas Plywood case provides ample room for merchandising labels or trade-marking—and the plywood design virtually eliminates transit damage.



\*Air Conditioner made by Westinghouse Electric Corp., Hyde Park, Mass.

### PUT YOUR OWN CASES TO THE TEST

Ship samples of your products, in their present containers, to the Atlas Plywood Shipping Container Clinic. We'll give them tests reproducing all conditions of actual transit. You'll get a full report on how they stand up, along with any needed recommendations for improvements in your container design. And you're cordially invited to watch the tests.

This service by Atlas Plywood — *the greatest name in plywood* — is absolutely free and you are in no way obligated to follow our recommendations. Take advantage of it to cut your present shipping costs, including what you pay for containers, for shipping those containers — at the rate for the contents — and for damages.

Your Atlas Plywood representative (see Classified Telephone Directory) will be glad to make the arrangements. Or write to Atlas Plywood Corporation, 1432 Statler Building, Boston, Mass.

**Atlas Plywood**  
CORPORATION  
FROM FOREST TO FINISHED PRODUCT  
PLYWOOD CONTAINERS • FLUSH DOORS • HARDWOOD PANELS





## PORTRAIT OF PRECISION

We make a big thing out of small parts because we know that your product's performance depends on even its smallest parts.

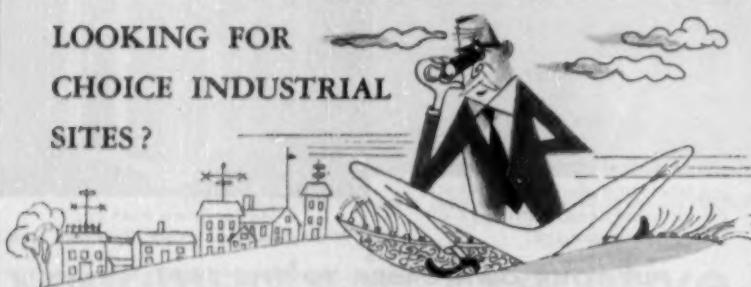
Automatic machinery of our own design produces over 10 million pieces like these each day...to customers' specifications...faster, better, and for less than you can make them yourself.

Our quotation costs you nothing—may save you plenty! Send us a sample part, a blueprint, or sketch and a letter outlining your requirements.

THE TORRINGTON COMPANY  
*Specialties Division*  
5 Field Street, Torrington, Conn.  
*Makers of Torrington Needle Bearings*

**TORRINGTON SPECIAL METAL PARTS**

### LOOKING FOR CHOICE INDUSTRIAL SITES?



You'll find a wide selection of excellent plant locations in various sizes...adjacent to rail, highway and utilities, in Stevens Point, Wisconsin. Stevens Point has more to offer than other cities of comparable size. For example, here you'll be offered an abundant skilled and unskilled labor supply...easy accessibility to the major mid-west markets...excellent transportation facilities...lower tax structure.

There are even more reasons why you should choose Stevens Point. Get all the facts...write, wire or phone today for your copy of our fact-filled brochure, "10 Reasons You'll Benefit By Locating in Stevens

Point." Your inquiry will be treated in confidence, of course.

K. D. WILLETT, President

**SP**

**stevens point**

INDUSTRIAL DEVELOPMENT COMMITTEE

122 STRONGS AVENUE, STEVENS POINT, WISC. phone STEVENS POINT 1500-1692

SP.3

of Harvard's B-School accepted a \$5,725 grant-in-aid from the YPO group that attended the course "for research in preparation of teaching cases dealing especially with management of new and growing businesses."

• New Jersey—The other experiment in the education of the American executive was taking place in a far different atmosphere—the Berkeley-Carteret Hotel in Asbury Park, N. J. (lower picture, page 108).

Attending were about 40 fourth-level executives of the vast Bell System—which has 700,000 employees and hundreds of executives, enough to start a school of its own.

That's just about what AT&T did. Each month a new group of executives checks in at the hotel for a four-week session. The setup is something similar to General Electric Co.'s intra-company marketing training program held at Madison Square Garden in New York (BW-Jul. 4'53,p66).

The aim is twofold. First, it wants to update its executives on management problems and skills. Second, and probably more important, it wants to broaden their views on labor relations, economic conditions, and business trends.

For a faculty, AT&T hires outside experts and makes use of top men in the company's ranks.

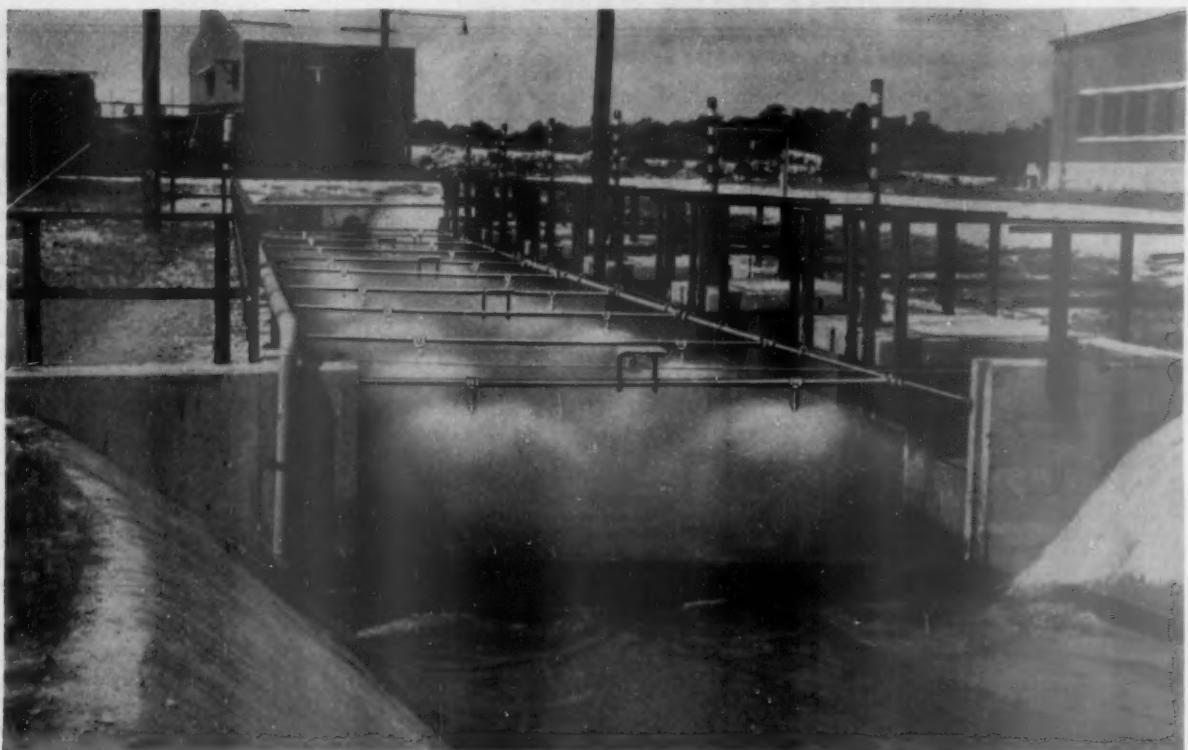
AT&T's program is still experimental, although it got under way last November. It's far enough along now, though, that the company is willing to talk about it for the first time. Current sessions will last until June.

### MANAGEMENT BRIEFS

Spinoff of Olin Oil & Gas Corp. by its parent company, Olin Industries, was completed last week, when each of Olin Industries' 3,600-odd stockholders received one share of the new corporation's common for every two shares of Olin Industries held.

Armistice Day has been removed from the holiday schedule by the Times-Mirror Co. of Los Angeles. Instead, each employee will be given a day off on his birthday. The Times-Mirror says that Armistice Day is no longer an appropriate holiday.

J. Wesley McAfee, president of the Union Electric Co., St. Louis (BW-Oct. 24'53,p54), and S. C. Bechtel, president of the Bechtel Corp. of San Francisco, left last week for South Korea to study problems involved in rebuilding the country's power system. The survey is being made under the auspices of the American-Korean Foundation, a private organization.



A BED OF RAGING FLAME would flash up instantly if this open oil separator caught fire without protection. But the automatic Rockwood WaterFOG system is ready for any emergency with immediate, flame-smothering action.

## Fire gets smothered in bed

Fire in this oil separator pit—where flammable liquids are recovered from water—would endanger everything in its area, including valuable buildings and equipment. And such a fire could start from plenty of common causes—careless smoking, a static spark, or sparks from improper tools, etc.

The automatic WaterFOG system, however, is on constant guard—ready to throw a smothering, cooling blanket over this very vulnerable hazard.

Now you can get the same thorough quick-acting protection for your own property, because the new Rockwood WaterFOG Sprinkler Heads can now discharge Water-

FOG from any conventional sprinkler system.

Spraying water in millions of tiny particles, which burst into a blanketing mist of steam, each WaterFOG Sprinkler head covers approximately 30% more area than ordinary heads. And uses less water, too, which means fewer WaterFOG Heads per

industrial and municipal installations.

The result of years of pioneering by Rockwood engineers, these new Heads are bringing the protective advantages of WaterFOG to more and more applications.

Learn how closely they meet your own requirements for low-cost, always dependable protection. Send the coupon.

### ROCKWOOD SPRINKLER COMPANY



Engineers Water . . . to Cut Fire Losses



**COOLS, SMOOTHERS, SAVES!** New Rockwood WaterFOG Sprinkler Head discharges uniform pattern down into flame space. Temperature is cooled, nearby inflammables are blanketed, ceiling goes unharmed.



**GET ALL THE FACTS** on the New Revolutionary Rockwood WaterFOG Sprinkler Head in Free illustrated booklet. Send the coupon today and get your copy by return mail.

#### SEND FOR THIS INFORMATIVE BOOKLET

ROCKWOOD SPRINKLER COMPANY  
112 Harlow Street  
Worcester 5, Mass.

Please send me your illustrated booklet on WaterFOG Sprinkler Fire Protection.

Name.....

Title.....

Company.....

Street.....

City..... Zone..... State.....



## This Acme service gives you **Asbestos Gloves** for Hot Jobs

Forged aluminum aircraft wing component. Complete machining and inspection operations by Acme.



Machining Army tank transmission case. One of a pilot production run by Acme. Cast, finish machined, inspected, and ready for final assembly before production machines were available.



Are you faced with an "impossible" delivery schedule on a new product?

Do you need more time to set up production lines . . . to get rid of "bugs" . . . even to do more process engineering on some parts?

When you have this kind of a hot job on your hands—and there are lots of them these days—remember that Acme Aluminum Alloys can help you. Acme's unusual facilities for pilot line production have solved these problems for many of America's leading manufacturers.

By precision machining a limited run of parts or sub-assemblies, Acme can help put you in production months ahead of schedule. In one plant, under one roof, you can obtain the remarkably complete services of an integrated engineering-pattern-foundry-tool room operation.

Need pilot line help? Get off a wire today!



*Patterns . . . Castings . . .  
Tools . . . Engineering*

**Acme** ALUMINUM ALLOYS, INC.

252 NORTH FINDLAY STREET, DAYTON 3, OHIO

## Wool Goes South

**CHARLESTON, S. C.**—To serve southern markets, wool spinners and weavers have been migrating from New England to this area, and seaports—Charleston, Savannah, and Wilmington in particular—have been jockeying for a wool processing plant to round out the industry. The prize looks big: The winner of the race will have a good chance to take all, since the business will grow around the first big processing plant.

This week, Charleston thinks it has won the contest. Nichols & Co. of Boston, reputedly the largest maker of wool tops in the country, announced it will start immediately on a \$3-million wool scouring and combing plant at Johnsonville, S. C., 75 mi. from Charleston.

Charleston boosters are confident that competitors of the Nichols company will follow suit. Raw wool has been going to Boston for scouring and combing; then the wool tops—cleaned and combed wool ready for spinning—have been shipped south by rail at extra cost.

## New Deal in Dials

**SAN DIEGO**—At one pull of the switches last weekend, 180,000 telephones in this area changed numbers. Officials of Pacific Telephone & Telegraph Co. said it was the Bell System's biggest shift of numbers at one time. Engineers had worked since last July to rewire the dial equipment at the central offices.

The change was necessary because fast-growing San Diego was running out of combinations for new numbers. The area had a variety of five-digit numbers (such as F-6965) and six-digit numbers (H 6-0379). But it needed the new national standard of seven letters and numbers (HO 6-0379), both for long-distance dialing and for more combinations.

PT&T changed the old numbers as little as possible—about 150,000 phones retain three to five of the old digits—but 30,000 subscribers must learn entirely new numbers. PT&T issued new directories, did a lot of advertising, and sent new number stickers to all subscribers. It estimates that the changeover cost the company more than \$1-million.

## Keeping a River Wet

**CHICAGO**—Inland suburbs of this city went on short rations of water during last summer's dry spell. So they're

## HAS YOUR LIGHTING KEPT PACE WITH PROGRESS?

interested in a plan suggested last week to draw upon the Des Plaines River, which flows south past the outskirts of Chicago. The key to the plan is a 34-mi. pipe to feed Lake Michigan water into the river during the dry season.

Revere Engineering Co. of River Grove proposes a privately financed utility company to build the pipe, a pumping station on the lake shore south of Zion, and filtration plants at five points along a 45-mi. stretch of the river. Engineers say the river would have to be fed by lake water only 30% of the year. They estimate cost of the project at \$8.3-million, cost of the treated water at 12¢ per 1,000 gal.

The suburban area contains a population of about 500,000. Sponsors say they could start the project as soon as 10% of the population signs up. Several of the communities already buy their water from Chicago.

### Cooperative Buying

**SAN FRANCISCO** — Women's coat and suit manufacturers are banding together in a purchasing cooperative that starts functioning in April. The small companies hope that putting their purchasing power together will save them enough money to offset the unfavorable freight differential of 7% to 8% that hurts them competitively.

The cooperative, San Francisco Coat & Suit Joint Welfare Assn., will make bulk purchases of zippers, linings, shoulder pads, tape, thread, tags, packing boxes, stationery, and manufacturing and office machinery. It will also guarantee the credit of its 26 members for purchases they may make independently.

Output of the women's coat and suit business here is rated at \$21-million wholesale value, but manufacturers must buck increasingly fierce competition. Local officials of the International Ladies Garment Workers Union have endorsed the new association as an aid in keeping the business alive.

### No Look-Alike

**SYRACUSE** — Hotel Syracuse lost a suit to compel Motel Syracuse, a tourist court in the eastern suburbs, to change its name. The appellate division of the state supreme court ruled that the motel owners had not been guilty of misrepresenting their establishment. Said the court: "There is not the slightest physical similarity between the motel and the hotel."

Hotel Syracuse, in the heart of the city, is a 600-room junior skyscraper.



### You're always ahead with Sylvania Fluorescent Lamps because:

A new exclusive processing technique now enables the interior coating on a Sylvania Fluorescent Lamp to maintain a higher degree of brightness for a longer period of time than ever before. This longer lasting brightness represents a bonus of light worth more than the cost of the lamp itself.

And remember, Sylvania Fluorescent Lamps offer you an assurance of complete satisfaction or your money back.\* For full information see your Sylvania Representative or write to Sylvania, Dept. 4L-1401, today!

\* Try 24 Sylvania Fluorescent Lamps of any popular type. If, in your opinion they don't give more light and maintain color and brightness for a longer time than any other brand, send them back with your signed Certificate of Assurance and your money will be refunded.

**SYLVANIA**

LIGHTING • RADIO • ELECTRONICS • TELEVISION

Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.  
In Canada: Sylvania Electric (Canada) Ltd., University Tower Bldg., St. Catherine St., Montreal, P. O.

# What's in a Name?

In the



dlake name, there is

ependability that never fails...

ife-long performance with no maintenance...an

cknowledged reputation for craftsmanship...the

now-how of an unequalled staff of specialists...and the

xperience gained from almost a century of  
manufacturing.

THE  
**Adams & Westlake**  
COMPANY

Established 1857 • ELKHART, INDIANA  
Chicago • New York

Yes, the ADLAKE name is a pledge of quality...and The Adams & Westlake Company has always kept faith with its customers. No effort is spared to make sure that every customer gets precisely what he bargained for...that he is completely satisfied.

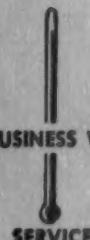
Manufacturers of ADLAKE Aluminum Windows, ADLAKE Specialties and Equipment for the Transportation Industry, and ADLAKE Mercury Relays.



# INTERNATIONAL OUTLOOK

BUSINESS WEEK

JAN. 30, 1954



So far Dulles and Molotov have just been sparring in Berlin.

Each has been playing up to France—Molotov working on French opposition to the European Defense Community, Dulles maneuvering to expose the Soviet foreign minister's game.

Even Molotov's move to get Red China in on a Big Five meeting looks like part of the propaganda phase of the Berlin meeting.

In another week or two, though, the foreign ministers will have to get down to the real conference issue—the unnatural division of Germany. At this point, there is a chance the conference might break up.

But the danger doesn't look too great. Molotov knows that he must at least talk seriously about loosening the Iron Curtain in Germany or lose his fight against German rearmament.

—•—  
The West may be faced with three Mediterranean sore spots by the end of the year—Italy, Spain, and Yugoslavia.

In each, trouble is brewing that could weaken the West's bargaining position vis-a-vis Russia.

The Communists are closer to power in Italy than at any time since 1947.

Red leaders plan to push the country from one political crisis to another until they force an election. Then they expect to put Nenni, the pro-Red Socialist leader, in power.

The Communists now have fertile ground to work on in Italy. Unemployment has reached about 4-million, if you count workers on short time. Land reform is at a standstill.

Some observers think that only a big new aid program for Italy can save the situation there.

In Spain you have a different kind of problem.

Now that Franco has a defense pact with the U.S., he has decided to shove the British and French around a little.

Franco has Paris plenty peeved over Morocco. There, Spanish agents have been fomenting Arab opposition to French rule.

Then the Spanish dictator has the British up in arms because of the fuss he's stirring up over Gibraltar.

In Yugoslavia the question is: How tightly is Tito tied to the West?

There's some evidence now that the dictator is wavering, may decide to start playing Moscow and Washington off against each other.

Certainly the Malenkov regime has been trying to warm up its relations with Belgrade.

—•—  
The Randall Commission Report (page 118) has drawn a lukewarm response in Europe.

In Paris, officials of the Organization for European Economic Cooperation praise the commission's support for a more liberal U.S. trade policy. But they don't think the recommendations for tariff cuts go far enough. And

# INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK  
JAN. 30, 1954

they doubt if the suggestions for boosting American private investment abroad meet the needs in this field.

London hasn't done any cheering, either. In fact, "Empire Firsters" have renewed their agitation for a sterling bloc largely independent of the dollar.

Some 30 British businessmen are now in Moscow dickering with Soviet trade officials (BW—Jan. 23'54, p132). These Britons are banking on big orders for electrical equipment, consumer goods machinery, and a wide range of manufactures.

No doubt they take comfort from the success a smaller group of British traders has had in Moscow during recent weeks. Members of this group have signed contracts for about \$25-million worth of trawlers and textile machinery.

Britain's steel denationalization is bogged down badly. Indeed, it's doubtful whether the present government can sell off more than a third, or a half, of the industry.

The second offering—Lancashire Steel Corp.—got a cold reception from private investors. They applied for only 100,000 of the 4.5-million common shares, just 1.1-million of an equal amount of preferred.

That puts the underwriters—a number of financial institutions led by insurance companies—on a spot. This week Lancashire common was being quoted at a heavy discount.

The upshot is that Lancashire has moved from Treasury to insurance company ownership. That was true, but to a lesser extent, in the case of United Steel Companies. That was the first steel company to go on the block, and it was better received.

Individual investors are apparently unwilling to accept the risk of future renationalization by a Labor government.

Northern Rhodesia looms larger in the free world's industrial future (BW—Jan. 23'54, p116). The copperbelt there is beginning to move out ahead of Chile as the ranking world producer behind the U.S.

That's the judgment of Ronald Prain, chairman of Roan Antelope Copper Mines.

Prain's words doubtless reverberated in Latin America. Chileans, facing a buyer's market with their own high-priced copper stocks, have been gnashing their teeth over Northern Rhodesia's expansive strides.

Preliminary dickering over President Eisenhower's world atomic pool plan has been going on in secret between Washington and Moscow. Meanwhile, U.S. and British experts have got together behind the scenes to try to draft a blueprint for an "international atomic authority."

Britons suggest that the pool be modeled after the World Bank. Like the bank, it would be a United Nations specialized agency, independent of other U.N. organs. The British idea would have nations contribute uranium ore, fissionable materials, and scientists to the common kitty. Voting rights could be based on contributions.

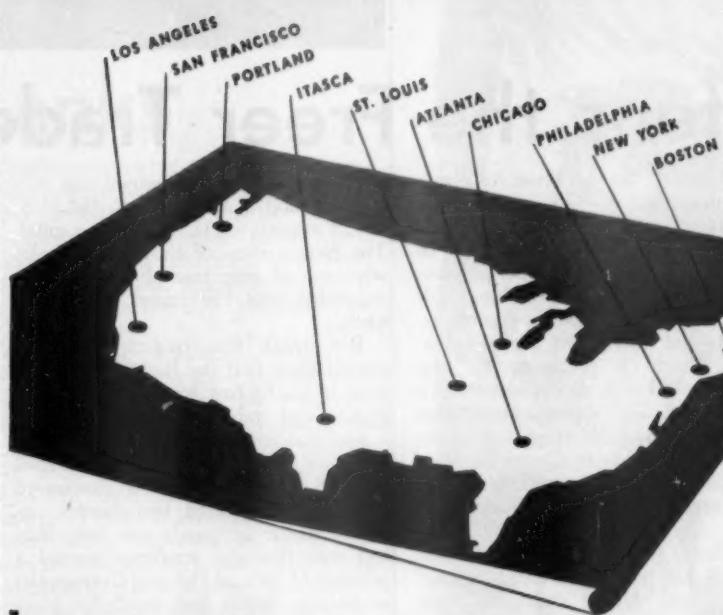
# ADHESIVES FOR PURE-PAK CONTAINERS

- WITH THE NEW POURING SPOUT -

ARE AVAILABLE THROUGH THE

NATIONWIDE ORGANIZATION OF

## 10 ARABOL PLANTS AND WAREHOUSES



Last year, 5,500,000,000 containers were made for use in Pure-Pak Equipped Dairies. This month, the Ex-Cell-O Corporation, producers of Pure-Pak Dairy Equipment, is introducing a new container with a built-in pouring spout. This has already been hailed as one of the most significant advances of recent years in an industry that has been growing steadily since 1940.

The Converters making Pure-Pak Containers and the Dairies using Pure-Pak Equipment, of necessity use only the finest adhesives... adhesives made to Ex-Cell-O's most exacting specifications. In 1953, 2,500 tons of adhesives were required to make and seal Pure-Pak containers. This figure should increase greatly in 1954.

The nationwide facilities of 10 Arabol plants and warehouses are fully geared to supply adhesives for the regular needs of both the container makers and the dairymen — to assure prompt delivery when and where adhesives are needed —

to help in meeting new specifications as they arise.

Here is one of a hundred industries in which Arabol is privileged to serve the leaders. In 69 years of pioneering, more than 10,000 adhesives formulas have been developed in our five laboratories. Our experience includes adhesives for all types of packaging machinery — including the most modern. Yet we firmly believe that there is *only one* adhesives formula that can best fill your requirements in any particular application. And since the amount spent for adhesives can hardly exceed 3% of your total packaging costs, it follows that you can afford adhesives made to your own specifications.

We invite the opportunity to submit samples for you to test in your own plant — under your particular working conditions — for your specific requirements, whatever their nature. That is the one kind of testing that assures you of satisfactory results. Your inquiry to Dept. 91 will bring a prompt response.



THE ARABOL MFG. CO.

... a nationwide organization

serving major users of industrial adhesives

EXECUTIVE OFFICES: 110 E. 42nd ST., N.Y. 17, N.Y.

CHICAGO • SAN FRANCISCO • LOS ANGELES

ST. LOUIS • ATLANTA • PHILADELPHIA • BOSTON

PORTLAND, Ore. • ITASCA, Tex. • LONDON, Eng.

# BUSINESS ABROAD

- Clarence Randall (right) and his group have turned in their report. It comes out squarely for a liberalized trade policy.
- Its recommendations would pave the way for lowering trade barriers, boosting imports.
- They encourage increased investment abroad and aid to friendly nations.
- Next step will be a bitter fight in Congress.



## Randall Stiffens the Freer Trade

When Clarence Randall laid his long-awaited report on future trade policy on the President's desk this week, he brought the U.S. to an important corner of history.

By a vote of 14 to three, the Randall Commission advised the Eisenhower Administration to push ahead with an internationalist policy.

If Congress now buys all or most of the Randall report, economic nationalism will no longer be a basic component of U.S. foreign policy. The trend would be set in the direction of lower trade barriers, government encouragement of foreign investment, emergency aid for friendly nations.

The Randall report clearly equates national interest with the long-term economic expansion of the free world as a whole.

• **Dissenters**—But there's sure to be a bitter fight in Congress before the issue is settled. The three most powerful Republican congressmen working with Randall dissented from the majority report and they will have many supporters in Congress, especially in Republican ranks. Rep. Daniel Reed of New York, chairman of the House Ways & Means Committee, and Rep. Richard Simpson of Pennsylvania criticized the report bitterly. Sen. Eugene Milliken of Colorado, chairman of the Senate Finance Committee, refused to commit himself to any of the key points.

It won't be just the politicians who enter the fray, either. Some big-name companies from important industries will be in there pitching against the

Randall report. So will some American labor groups.

• **Pushing It Through**—To win its fight the Administration will have to use all the political guile and pressure at its command. It will be a tough job even to pry legislation out of committee and onto the floor. But the Administration already is preparing for the battle. Interested departments have split up the Randall report among them and are feverishly drafting legislation for early submission to Congress. The whole package will be embodied in a special message to Congress in a few weeks.

President Eisenhower himself will throw all his political prestige behind this program. He is convinced that liberalization of U.S. foreign economic policy is urgently needed to maintain free world unity, that a showdown with the protectionists here at home can't be delayed any longer.

Odds are better than even that with Democratic support the Administration can force a substantial part of the Randall report through Congress this spring. Certainly the White House is optimistic this week about its chances.

• **Meaning**—The recommendations of the Randall report fall under five main headings: lowering of trade barriers, aids to currency convertibility, encouragement of private foreign investment, raw material and agricultural policies, and foreign aid policy.

Even if implemented in full, the Randall recommendations would not by themselves right the dangerous imbalances that still exist in the free

world economy. They would not promote a flood of imports into the U.S. nor of exports of U.S. private capital. The fact is many of the more extreme advocates of freer trade have been disappointed that the report doesn't go further.

But most free traders here and abroad agree that the Randall proposals provide a solid base for world economic growth and stability—most importantly a new continuity of American policy, including assurance that the main trend of U.S. trade barriers is downward and of U.S. foreign investments upward. If the proposals win out, they feel sure that the tendency toward a permanent split of the non-Communist world into dollar and nondollar blocs can be checked.

Many usually cautious monetary experts in Washington go further than that. They predict that if the bulk of the Administration foreign economic program is enacted this session, key European currencies will be made convertible on current account within a year.

### I. Tariff Advice

The most controversial aspects of the program are the trade and tariff proposals, most of them tied in with the Reciprocal Trade Act. They would add up to a substantial lowering of trade barriers. The Reciprocal Trade Act would be extended initially for three years and later for a longer period.

The commission urged additional Presidential power to reduce tariffs.



## Ranks

Drastic pruning of the jungle of customs regulations, virtual repeal of the Buy American laws, revision of the escape clause and peril point provisions to make it harder for U.S. firms to get tariff relief, scrapping of special preferences for the U.S. Merchant Marine.

• **Presidential Cutting Power**—The President would get three types of new tariff-cutting authority. He could reduce any duty 5% below present levels each year for three years in exchange for reciprocal concessions. The President also could cut tariffs unilaterally to half of 1945 levels on commodities that aren't being imported in substantial volume into the U.S. now, and could unilaterally reduce any duty now above 50% ad valorem to a ceiling of 50%. The last two proposals introduced for the first time the concept of unilateral U.S. tariff cuts. International economists have pointed out for years that reciprocal tariff concessions had no effect on the chronic dollar payments imbalance and on discrimination against U.S. goods since they merely increased the total volume of trade both ways. Acceptance of the principle of unilateral U.S. tariff cuts would give the U.S. a much more flexible trade policy, would provide bargaining counters in obtaining needed internal economic reforms abroad as well as tariff concessions.

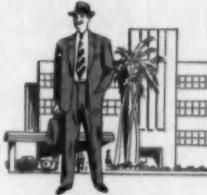
• **Peril Point**—Randall's most important last-minute concession to Sen. Millikin was to agree to retain the peril point and escape clause provisions of the Reciprocal Trade Act. Under these

# YOUR BUSINESS CAN PROFIT FROM Both Southern Californias

COME OUT AND SEE...RIGHT NOW!

#### Southern California—the Market

The Los Angeles area, as you know, has grown spectacularly since the war. Since January 1940 more than two million people have been added to the Los Angeles market—more people than live on Manhattan Island.



Surely this \$6 billion market, third largest in the U.S., deserves your personal attention. And while you're here, why not profit from the other Southern California, as well?...



#### Southern California—the Vacationland

Bake out your worries in the luxurious winter warmth beside a sunny pool. Ride over the colored sands of our great peaceful deserts. Golf among palm trees. Motor through the lush subtropic valleys and along the blue Pacific. Have fun exploring Hollywood. Enjoy the winter racing season (it's on right now). Go home refreshed—with a brand-new store of health and energy!...Why not come now?

**COLOR MAP**, official sightseeing map of Los Angeles County and all Southern California, 22½" x 25", traces routes for tours, locates 645 sights visitors want to see most. It's free. Just mail us the coupon below.

**ALL-YEAR CLUB OF SOUTHERN CALIFORNIA.** This advertisement sponsored by Los Angeles County Board of Supervisors for citizens of Glendale, Hollywood, Inglewood, Long Beach, Los Angeles, Pasadena, Pomona, Santa Monica and 182 other communities.

All-Year Club of So. California, Div. 2-H-1  
629 So. Hill St., Los Angeles 14, California  
Please send me free Color Sightseeing Map.

Name \_\_\_\_\_

Street \_\_\_\_\_

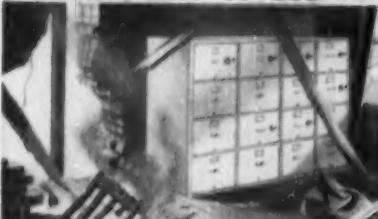
City \_\_\_\_\_

Zone \_\_\_\_\_ State \_\_\_\_\_

PLEASE PRINT NAME AND ADDRESS



## PROTECT YOUR RECORDS AT POINT OF USE



### IN HERCULES® MULTI-LOX INSULATED STEEL FILES

Most of the files you now own contain papers whose loss might put you out of business. If they're ordinary steel files they're incinerators. If they're Hercules insulated steel files they'll protect your records against a one-hour fire of 1,700°.

Moreover, Hercules exclusive patented locking arrangements offer you tailor-made controls, on individual drawers, with keylocks, or combination locks, or both. All this for about twice the cost of uninsulated steel files.

*Moral: wherever you keep and use records, keep them safe 24 hours a day in Hercules insulated steel files.*

See your office equipment dealer or write to Meilink Steel Safe Company, 1672 Oakwood Avenue, Toledo 6, Ohio.

WITH MEILINK IT'S FOR KEEPS



### ELECTRONIC **AMPLICALL** "CLEAR LINE" INTERCOMMUNICATION

Equip your business with this remarkable time-saving internal communication system. Have "clear line" facilities for instant speech contact within and between departments. Electronic AMPLICALL frees your busy switchboard for important outside calls — keeps personnel on the job — saves "walking and waiting time" — pays for itself. There is a system to fit your needs.

*For your nearest AMPLICALL specialist, look under "Intercommunication" in your phone book, or write us direct.*

**RAULAND-BORG CORPORATION**  
3515-X Addison St., Chicago 18, Ill.

provisions, the Tariff Commission defines peril points below which it would be injurious to domestic industry to lower tariffs, and recommends tariff relief for industries injured by imports.

Many exporters have hesitated to invade the U.S. market for fear that if they were successful tariffs or quotas would be imposed upon them retroactively under the escape clause. The clause has been the No. 1 target of the partisans of freer trade.

Though the peril point and escape clauses are retained in the report, the commission urged that the President be expressly authorized to disregard Tariff Commission recommendations whenever the national interest requires it. Under present law the President may veto a Tariff Commission recommendation only by implicitly questioning the accuracy of the commission's finding of injury to a domestic industry. Introduction of the yardstick of national interest would make it easier for him to override the Tariff Commission.

## II. Simpler Customs Rules

The simplification of customs classifications and administration recommended by the Randall Commission actually would do more to encourage imports than the more controversial tariff-cutting authority. The U.S. tariff structure has grown like a cancer in all directions since 1930. Nobody even knows how many different classifications there are although estimates run as high as 8,000.

The report recommended that after a thorough review of the whole tariff structure, with a view to simplification, the President be empowered to change commodity definitions and rates, provided that the total group of rates in any group of commodities was not changed. This operation could result in a sharp reduction of the average ad valorem rates.

The commission also recommended immediate passage of the customs simplification bill now pending before the Senate.

## III. Preferential Treatment

The report advised, in effect, repeal of the Buy American laws that give a preferential status to American firms bidding for government contracts. The recommendation would amend the laws so that foreign bidders would be on equal footing if their countries granted reciprocal treatment to U.S. bidders for government contracts abroad.

Laws requiring the use of American merchant vessels for shipments financed by U.S. government loans or grants also should be scrapped, in the opinion of the commission. Direct subsidies

should be substituted for them after a reevaluation of the size of the fleet required for national security.

• **Effect on Imports**—The experts have only just begun to evaluate the short-term effect of these proposals on U.S. imports. Detailed study of the tariff structure, of the rate structure, of the impact of Buy American rules will be required before even a rough guess can be attempted. Yet it is clear that the proposals, taken together, add up to a substantial lowering of trade barriers, which could not fail to boost imports markedly over a period of years.

## IV. Currency Convertibility

The Randall Commission tackled another important angle of our foreign economic policy—the question of currency convertibility. In this field it urged that the International Monetary Fund permit free use of its \$3-billion loan to stabilize currencies that are made convertible.

The Federal Reserve Board was urged to open standby lines of credit with countries attempting convertibility. Thus the FRB would provide a second line of defense against collapse of their currencies. The Federal Reserve is rumored to be ready to supplement IMF funds to the extent of \$3-billion if necessary.

These two recommendations together clear the way for convertibility of key European currencies on current account in the opinion of U.S. monetary experts.

Chances are, though, that European governments will wait to see how long the current U.S. recession lasts and how badly they've been hurt by it. Then, if Congress has acted favorably on the Randall report as a whole, they may take a cautious flyer.

## V. Package of Proposals

The commission came up with major new incentives for foreign investors, some of them already incorporated in the budget message. Corporate and individual tax rates on income from foreign investments should be cut an equivalent of 14%. Antitrust laws affecting foreign investments should be liberalized. Government guarantees against loss through nonconvertibility of profits should be continued and guarantees against loss through war or revolution should be tried on a limited basis.

• **Farm Goods**—Finally, the commission grasped the political hot potato of high fixed supports for farm prices; it recommended adoption of a flexible price-support system in the interests of freeing world trade. And it substantially backed present Administration policies on aid, foreign lending, and East-West trade.

## BUSINESS ABROAD PATTERN

### Who'll Make Foreign Policy?

**T**HIS WEEK, the Senate began debate on what may be one of the great constitutional issues in our history—Senator Bricker's proposed constitutional amendment to curtail the treaty-making power of the President and of the nation. The Bricker amendment not only divides both political parties, but stands as a challenge to President Eisenhower's leadership of his own party. If adopted, it might bring a crippling change in our methods of conducting foreign policy.

Remove the legal trimmings, and the case made by Senator Bricker and his backers is fairly simple. As the Constitution now reads, they argue, there is a double threat to American sovereignty:

First, through our membership in the United Nations, we could become party to a treaty that would overrule domestic laws and impair our basic individual rights. Among such treaties, neither of which has been ratified yet by the U.S., are the U.N.'s Genocide Convention and its International Covenant on Human Rights.

Second, the wartime agreements made at Teheran, Potsdam, and Yalta have demonstrated that the presidential power to make executive agreements (these do not require Senate ratification) has been stretched beyond its traditional limits.

The proposed Bricker amendment seeks to eliminate these alleged dangers by: (1) explicitly prohibiting any treaty that conflicts with the Constitution; (2) requiring that for a treaty to be effective internally there must be implementing legislation that would be valid in the absence of the treaty, and (3) making executive agreements subject to congressional regulation.

**E**ARLY THIS WEEK, President Eisenhower took a strong stand against the Bricker proposal. He said: "... I am unalterably opposed to the Bricker amendment... It would so restrict the conduct of foreign affairs that our country could not negotiate the agreements necessary for the handling of our business with the rest of the world. ... We cannot hope to achieve and maintain peace if we shackle the federal government so that it

is no longer sovereign in foreign affairs."

Eisenhower, of course, is looking at the issue in terms of present and future needs. But there are convincing arguments from our history to back him up.

The main attack is against Section 2, containing the famous "which" clause. This section calls for implementing legislation "which would be valid in the absence of treaty." Its adoption could mean that in fields where legislative power is left to the states, any state legislature could make certain treaties ineffective within its state's borders by not passing implementing legislation. These could be treaties dealing with commerce, navigation, and friendship; narcotics control; international control of atomic energy.

**E**ISENHOWER'S BACKERS also come down hard on Bricker's proposal to make executive agreements subject to congressional regulation. They say this would, in effect, shift the right to conduct foreign affairs from the President to Congress and thus completely upset the traditional balance of power. Furthermore, because the day-to-day operations of our affairs abroad could be ensnared in lengthy political debate, our power to lead the free world in its struggle for peace would be emasculated. Critical, on-the-spot agreements, such as those that ended the fighting in Korea and terminated the Berlin airlift, could be held up by Congress, and perhaps by the states.

Those against the Bricker proposal also point out that the Senate already has strong regulatory power over treaties. In addition, virtually all executive agreements require implementing legislation to be effective, or, as in tariff negotiations, they are made under the provisions of previous legislation. If a President should go too far, there is always the Senate's impeachment power.

As for Section 1 of Bricker's proposal, its opponents say that an amendment which prohibits an unconstitutional treaty would simply be a restatement of the present Constitution and of numerous court decisions.

On Wednesday Eisenhower was ready to compromise.

## SPEEDY CUT

### POWER

### CUT-OFF SAW



### IT'S NEW... IT'S FAST

*Now cut around  
tubes, pipe or  
structural shapes*

Cuts tubing, pipe and structural shapes... most wall thicknesses—no distortion—no misalignment—minimum burrs. You get a square, clean surface every time. Saves time, labor and money. Operates on standard 110-volt alternating or direct current.

"Speedy-Cut" cut-off saw is portable. Use it in shop or for field work. Quickly adjusted to any size tube, pipe up to 12" O.D., structural shapes within the limit of saw unit. So simple anyone can operate it. Can be secured to any bench.

Send for illustrated brochure. It will show many kinds of material being cut on the "Speedy-Cut."

UNDER \$500.00 FOR  
CAPACITY UP TO 12"

### WALLACE TUBE COMPANY

Dept. BW • 1312 Diversey Pkwy.  
Chicago 14, Illinois



Bending Specialists since 1900



## In 1 minute

The Verifax copying method, Kodak's sensational new discovery for today's busy offices, gives you—

## 3 copies

of any letter or other office record—legible, dry, photo-exact—and made...

## on ordinary paper

instead of on specially treated paper. These 3 copies are produced from a single sheet of Verifax Matrix Paper for—

## only 4¢ apiece

... which is real copying economy!

**The surprisingly low-priced Kodak Verifax Printer, \$240,** is the only equipment needed. It will quickly pay for itself by eliminating costly retyping, proofreading...and enabling you to dispatch legible black-on-white copies immediately. **No skill required . . . no fussing**—anyone can learn to make Verifax copies in a minute or two... and no adjustment in your present room lighting is necessary.

### Verifax copying saves wherever there's paper work

— MAIL COUPON TODAY —

**Eastman Kodak Company  
Industrial Photographic Div.  
Rochester 4, N. Y.**

Gentlemen: Please send free Verifax folder and names of near-by dealers.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_  
Price quoted is subject to change without notice.

21

Kodak

# GM Expands in Brazil, Too

Dollar exchange problems are forcing auto makers to build up local production in Brazil... Outflow of dollars for foreign investment continues... American stock exchange lists Dutch shares.

General Motors is talking expansion in Brazil, just as it is in this country (BW-Jan. 23'54,p17). Last week, Harlow Curtice, president of GM, confirmed reports that negotiations were under way between General Motors do Brasil and the Rio government over a multimillion-dollar blueprint for a large increase in truck production. Made-in-Brazil parts would replace imports wherever possible.

While GM refuses to elaborate, it's clear that its thinking is motivated by more than simply bullishness on Brazil. GM, like all foreign auto importers and assemblers in Brazil, is caught in a situation that practically forces expansion of local production. Brazil's dollar exchange troubles have brought stringent import curbs on vehicles and parts. Moreover, Brazil's natural desire to create a home auto industry self-sufficient of imports will tend to keep import barriers in place.

• **Starvation**—Today, assembly plants (Ford, GM, Studebaker, Nash, Willys are represented) are languishing for want of parts. One Sao Paulo auto man figures that, over-all, the industry is operating at no more than 10% of capacity. Parts and unassembled cars and trucks can be imported, to be sure, but only when dollars are available and even then at an expensive cruzeiro-dollar rate. Imports of finished vehicles are allowed, but they are pegged at an almost prohibitive exchange rate. And there's a law on the books—though not as yet enforced—that calls for a complete ban on finished autos.

So any outsider who wants to maintain his stake in Brazil's auto market will have to move fast into local manufacture. Hence the expansion plans:

General Motors has bought a large new plant site outside Sao Paulo. It's dickering now with the government for approval of machinery imports that will allow manufacture of a vehicle (reportedly a Chevy truck) that is 80% Brazil-made. Ford of Brazil is increasing its proportion of local parts. International Harvester, Studebaker, and Nash may follow suit.

• **More Competition**—Western Europeans, including Volkswagen, Fiat, Daimler-Benz, are thinking of setting up shop in Brazil. Volkswagen, which hopes to produce a 100% made-in-Brazil car within five years, has been trying for a year to hammer out an investment

deal with the Brazilian government. VW officials think now that an O.K. may be coming from Rio de Janeiro soon.

### Investment Abroad...

	Millions of Dollars	
... where it is	1950	1952
Canada	\$3,579	\$4,593
Latin America	4,735	5,758
Western Europe	1,720	2,145
Other areas	1,753	2,321
... what it does		
Manufacturing	3,831	4,920
Petroleum	3,390	4,291
Mining	1,129	1,642
Other Industry	3,438	3,966

Data: Dept. of Commerce

BUSINESS WEEK

### Dollars Overseas

Last week the Commerce Dept. published the latest of its surveys of U.S. private investment abroad. It's apparent that the outflow of dollars is increasing (table). But the increase isn't enough to satisfy many economists who believe that Americans must speed up their investment abroad if the U.S. is to play its proper role in world development.

Commerce finds the value of U.S. holdings in foreign subsidiaries and branches at the end of 1952 was \$14.8-billion; first estimates for 1953 jump the total to over \$16-billion. That would mean a \$4-billion increase since 1950, with a record annual addition of \$1.8-billion in 1952. Last year's increase sagged below the 1952 figure, but it was still ahead of the postwar annual average.

• **The Score**—Manufacturing investment continues to lead the field—some \$4.9-billion, compared with petroleum (\$4.2-billion) and mining (\$1.6-billion). Postwar, a big share of this investment has come from plowing back the earnings of foreign subsidiaries. In 1952, says Commerce, \$876-million was reinvested, half of the net increase in investment.

The Western Hemisphere—with

70% of the total—is rapidly gaining on the rest of the world in terms of U.S. investment. Canada leads the countries with \$4.6-billion, with Venezuela's \$1.2-billion second.

Over the past few weeks, there's been a lot of discussion of ways and means to encourage the flow of private investment dollars. Many believe that is one of the soundest methods of helping balance the world's dollar deficit, and, incidentally, creating bigger markets abroad for U.S. exports. Tax incentives have figured importantly in the talk, and last week the U.S. Chamber of Commerce proposed a 50% cut in federal income taxes on earnings of foreign subsidiaries. The President, in his budget message, and the Randall Commission (page 118) have both recommended a 14% tax cut as a starter.

## Dutch Stock Listed

The American Stock Exchange (the old New York Curb) last week approved for trading the U.S. shares of Algemene Kunstzidje Unie—AKU, for short. The huge rayon combine, one of the world's largest producers, will be the first Dutch company to have its securities traded on a U.S. exchange since 1936. And its recent offering of shares is the first from continental Europe ever to be registered with the Securities & Exchange Commission.

Involved in the registration were 180,000 "American shares" of AKU, each equal in value to one-twentieth of a Dutch share. Essentially, they are certificates representing a block of Dutch shares purchased direct from AKU last year by a New York investment group headed by Lazard Freres. Permission to offer "American" shares publicly was granted last month by the SEC.

**Votes Limited**—AKU never sought a listing on the New York Stock Exchange. As in the case of most Dutch companies, AKU shares provide strictly limited voting rights (no more than six votes to any shareholder). That's something the Big Board frowns on. In 1936 Royal Dutch-Shell had to cease Big Board trading when the governors objected to the voting setup.

The Curb, however, has no such hard-and-fast rules. AKU shares, Curb officials believe, qualify for listing in a number of other respects.

AKU and its affiliates in Britain, Germany, Spain, Italy, and the U.S. produce some 12% of the world's rayon, as well as other synthetic fibers and plastic materials. The combine's U.S. holding is a 55% interest in American Enka Corp. The idea behind the U.S. listing is to broaden the market base for AKU shares beyond the confines of the Netherlands.

## BUSINESS ABROAD BRIEFS



Celal Bayar (above), president of Turkey, arrived in the U.S. this week for a month-long official visit. He is seeking economic aid to expand Turkey's exports, which have tripled in volume since 1949. He'll invite U.S. private investment into Turkey—made more attractive by a new, more liberal foreign investment law passed last week by the Turkish Parliament.

**West Germany's Krupp interests** are reported willing to help Indonesia build a small steel industry, ready to supply machinery, know-how, and capital. Krupp is a leading factor in a combine preparing to build a \$150-million steel mill in India (BW-Aug. 22'53, p104).

**More Canadians:** Population broke the 15-million mark sometime in November, reports the Dominion Bureau of Statistics; by now there are probably 15,075,000 Canadians. That's a 32% jump since 1940 compared to a 23% increase in the U.S.

**United Fruit Co.** rejected a proposal by Costa Rican president Jose Figueres to increase its tax payments from 15% to 50% of earnings. But there is room for compromise, says the company. Meanwhile, Figueres is nursing the idea of buying out United Fruit's Costa Rican holdings entirely.

**More trade tours:** To boost sagging exports, Japan is sending three eight-man teams equipped with Japanese product samples to the Middle East, West Africa, and Central America. . . . West German businessmen will send a motorized trade exhibit for a swing through the Middle East next fall. The Austrians already have a similar truck show on the road in West Africa (BW-Jan. 23'54, p128).

## A RECORD YEAR FOR



We're busting our buttons and rightfully so. For 1953 proved to be the greatest year for industrial expansion Louisiana has ever seen. A total of \$268,000,000.00 was invested in new or expanded industry in Louisiana during the past year.

The 1953 total of \$268,000,000.00 is 56% higher than the entire six-year period of 1936-1941, and the entire total of industrial expansion in the eight-year postwar period is in excess of one billion! When you consider the industrial resources of Louisiana — labor supply, power, water, climate, raw materials, natural resources, transportation, it is no small wonder that industrialists everywhere are agreeing that Louisiana has all the requisites for economical and efficient industrial production.

Add all these facts about Louisiana together and you too will agree that before you decide on a new plant location it would be helpful to take a big look at Louisiana.

Figures quoted are from Louisiana Dept. of Commerce & Industry.

**STATE OF LOUISIANA**  
DEPARTMENT OF  
COMMERCE AND INDUSTRY  
CAPITOL BUILDING  
BATON ROUGE 4, LOUISIANA



## So MAGNAFLUX Finds Cracks— —WHY?"

The answer to this question, asked by a reader, is very simple.

**Cracks** cause machines and parts to break down. This always costs somebody money—either the user or manufacturer. The failure may be disastrous —yet the crack that causes it is too small for the eye to see!

**Magnaflux finds these cracks—and marks them on the part itself!** This helps manufacturers to make products that serve you better and at lower cost.

**That's Just Part of it.** Finding cracks gives manufacturers economical control of quality. By many fast testing methods, Magnaflux can spot defects in practically any metal or material at a time when rejection or salvage is easiest and cheapest. This enables correction of the cause of defects. All of this saves money! Used in maintenance, Magnaflux reduces machine failures. It keeps overhaul on efficient, planned schedules.

**WRITE** for our free booklet, "Seeing Isn't Always Believing"—on how to cut the cost of defects in your own business.

**Good example of Magnaflux at work.**

Magnaflux® indication of an invisible, but very dangerous, crack in a huge crane hook.

\*T. M. Registered,  
U. S. Patent Office

**MAGNAFLUX**



**MAGNAFLUX CORPORATION**  
7306 West Lawrence Avenue • Chicago 31, Illinois  
New York 36 • Pittsburgh 36 • Cleveland 15  
Detroit 11 • Dallas 9 • Los Angeles 58

# THE MARKETS

## Savings Banks' Mutual Fund: The Common Stocks It Is Buying

Issue	(Shares)			Percent of Total* for Investment	Issue	(Shares)			Percent of Total* for Investment
	Purchased in 4th Qu. of 1953	Held-inings	End of 1953			Purchased in 4th Qu. of 1953	Held-inings	End of 1953	
<b>Chemicals Total</b>				<b>7.49%</b>	<b>Retail Trade Total</b>				<b>9.72%</b>
E. I. du Pont	200	1,100	1.94		First Nat. Stores	...	1,300	1.12	
Hercules Powder	600	1,400	1.59		Food Fair Stores	100	2,510	1.29	
Tex. Gulf Sulph.	700	1,700	2.25		H. L. Green	600	2,700	1.38	
Union Carbide	200	1,400	1.71		Jewel Tea	300	2,000	1.39	
<b>Containers Total</b>				<b>5.22</b>	Montg. Ward	300	1,600	1.47	
American Can	...	3,900	2.53		G. C. Murphy	500	1,900	1.36	
Continental Can	400	3,000	2.69		J. C. Penney	400	1,400	1.71	
<b>Drugs Total</b>				<b>4.66</b>	<b>Rubber Total</b>				<b>1.77</b>
Mead Johnson	5,000	5,000	1.26		B. F. Goodrich	200	1,400	1.77	
Chas. Pfizer	...	3,000	1.66		<b>Tobacco Total</b>				<b>7.72</b>
Sterling Drug	1,200	2,900	1.74		American Tobacco	300	2,200	2.22	
<b>Finance Total</b>				<b>5.95</b>	Liggott & Myers	...	1,600	1.70	
Beneficial Loan	2,200	2,200	1.38		Lorillard, P.	1,000	3,800	1.59	
C.I.T. Fin.	700	4,800	2.37		R. J. Reynolds "B"	500	3,400	2.21	
Comm'l Credit	500	3,800	2.20		<b>Electric &amp; Gas Total</b>				<b>18.85</b>
<b>Food Total</b>				<b>10.63</b>	American Gas	600	3,300	1.88	
American Chicle	300	2,300	1.86		Carolina Power	200	1,700	1.16	
Borden Co.	300	2,000	1.98		Cincinnati Gas	...	3,200	1.14	
Corn Products	200	1,500	1.81		Comm. Edison	...	1,800	1.10	
General Foods	200	1,900	1.87		Con. Ed. N. Y.	100	2,200	1.48	
Nat. Dairy Prod.	200	1,800	1.93		Con. Gas (Balt.)	400	2,600	1.15	
Sunshine Biscuit	1,000	1,000	1.18		Gulf States Util.	400	3,200	1.39	
<b>Metals Total</b>				<b>2.32</b>	Idaho Power	100	1,400	1.01	
Climax Molybdenum	600	3,800	2.32		Kans. City Pow.	700	2,700	1.42	
<b>Petroleum Total</b>				<b>13.36</b>	Louisville Gas	1,700	1,700	1.14	
Continental Oil	200	1,900	1.62		No. States Power	5,200	5,200	1.17	
Ohio Oil	400	2,400	2.12		Oklahoma Gas	400	3,200	1.40	
Phillips Pet.	200	2,000	1.76		Phil. Electric	300	2,100	1.12	
Shell Oil	274	1,600	2.02		Va. Electric	300	2,700	1.20	
Skelly Oil	3,000	3,000	1.75		Wisconsin Elec.	200	2,300	1.09	
Stan.-Oil (Cal.)	400	2,200	1.91		<b>Telephone Total</b>				<b>2.05</b>
United Carbon	500	2,300	2.18		A. T. & T.	...	800	2.05	
<small>*Based on dollar value.</small>				<b>Miscellaneous Total</b>				<b>3.09</b>	
				Gen'l Amer. Transportation	700	4,700	3.09		

BUSINESS WEEK

## When Bankers Buy Stocks

New York State mutual savings banks are taking a close look right now at the results to date (tabulated above) of their first venture in a new form of cooperative investment—the purchase of common stocks through a mutual fund. Up to now, 63 of the state's 180 mutual savings banks are in the fund, and they are right pleased with what their scrutiny shows.

Savings banks applauded two years ago when the New York State legislature permitted them to invest part of their assets in common stocks. (Their investment in preferreds and commons is limited to a maximum of 5% of assets or 50% of surplus and undivided profits, whichever is lower.)

• Problem—But the law left the smaller banks with a dilemma. Big institutions

ould organize investing departments to handle common stock purchases, but many smaller ones found this too costly. These banks decided that the thing to do was to set up a mutual investment fund, the shares in the fund to be held only by savings banks, with no public participation.

So eight months ago a group of the banks in cooperation with the Savings Banks Trust Company—the New York mutuals' "Federal Reserve"—formed a fund to handle common stock investments. Known as Institutional Investors Mutual Fund, Inc., its shares were first offered to banks May 1 at \$1,000 each.

• **Good Showing**—The 63 banks that have purchased 5,875 shares of the fund are proud of these figures:

- For the first seven months of operation, the expense of running the fund was less than \$19,000.

- Dividends received on common stocks totaled a little over \$72,000.

- Net assets of the fund, as of Dec. 31, were something over \$6-million, of which almost \$129,000 was unrealized appreciation of securities held.

- Net asset value fluctuated from a low of \$952.97 a share on June 16 to a high of \$1,045.24 on Dec. 3, 1953; yearend figure was \$1,036.27.

- The average yield at current dividend rates on book cost of stocks held at the yearend was 5.19%, compared with 5.08% on Sept. 30 last and 5.01% on June 30 last.

- A dividend of \$15 a share was paid from ordinary income on Oct. 15 last. Another of \$13.87, declared Jan. 14 of this year, included net short-term capital gains of 46¢ a share.

"The performance of the fund cannot be judged by the record of any brief period," J. Wilbur Lewis, president, told its shareholders. "It may be of interest, however, to note that performance has been better than that of widely used stock market averages."

- **Sales, Too**—In addition to its purchases, the fund in its first eight months made some sales. It bought 1,800 shares of Dow Chemical Co., and saw its holdings increase to 1,845 shares through a 2½% stock dividend. It purchased another 200 shares, then sold the entire Dow Chemical holding.

It also sold 2,200 shares of Union Oil Co. of California and 800 rights to purchase American Telephone & Telegraph 3½% debentures, due 1965.

- **Favorites**—The fund has been a substantial purchaser of so-called "defensive" shares. The percentage in utility shares—well-known "defensive" favorites—standing at 18.85%, is highest for any group.

# Why

do practically all businesses insure the value of their property against loss from fire, tornado and other hazards?

# Why

do so many businesses fail to protect themselves from the greatest loss of all—death of key personnel?

Loss of property is serious enough, but a burned factory can be rebuilt, bigger and better than ever. When you lose an important man in management, however, you lose a peculiar ability that is difficult to duplicate in any other person.

An experienced New England Mutual career underwriter is ready to discuss with you, your attorney and the trust officer of your bank, a special stabilization plan that will best protect your business. For further information, just mail the coupon below.

## The NEW ENGLAND MUTUAL



Life Insurance  
Company of Boston

THE COMPANY THAT FOUNDED MUTUAL LIFE INSURANCE IN AMERICA—1835

NEW ENGLAND MUTUAL  
P. O. Box 333 B-2 Boston 17, Mass.

Mail me, without cost or obligation, the booklet dealing with  
 Key Men    Sole Proprietorships    Partnerships    Close Corporations

Name \_\_\_\_\_

Address \_\_\_\_\_

Company \_\_\_\_\_

# LABOR

## Next Bargaining Line: Ability to Pay

Now that the cost-of-living index has slowed its movement, unions want to push it into the background in wage talks. Employers hope to use it to bar raises.

Unions will still press for more pay—but will base demands mainly on employers' tax savings with end of the excess-profits tax.

The shift in stress may throw the spotlight on financial statements at the bargaining table.

The government's cost-of-living index—the key factor in wage bargaining for years—will play a new and perhaps lesser role in 1954 contract talks. Employers will use it to back up arguments that pay boosts aren't warranted. And as long as the index shows no appreciable rise (it settled a little in December, to 114.9% of 1947-49 average costs), unions will try to ignore it.

Most are already preparing a made-to-order alternative argument for pay hikes: the increase in employers' savings due to the end of the federal excess-profits tax.

Tug of War—EPT expired the first of the year, leaving many employers with a rosy prospect of substantial tax savings in 1954. It goes without saying that everybody had ideas about where the savings should go. Wall Street counted it as money in the bank for stockholders, who had been calling for a bigger cut of profit pies. Management debated raising dividend rates or plowing the savings back into the business.

Unions, determined to go after a new wage round this year, had still other ideas about what should be done with industry's kitty.

The International Union of Electrical Workers (CIO), for instance, quickly served notice on Westinghouse Electric Corp. that it wants "substantial" pay gains this year as part of a 10-point economic demand it will make in April negotiations. IUE said that Westinghouse should save about \$20-million a year as a result of the end of EPT, about \$260 a year per employee—enough, IUE added, to "finance the improvements asked."

About the same time, the United Rubber Workers (CIO) began prebargaining maneuvering in Akron. President L. S. Buckmaster noted that elimination of EPT "can mean a continued high level of profits for major rubber firms in 1954—even with a possible sharp decline in total sales."

And the United Auto Workers (CIO), eying the auto industry's 1953 excess-profits taxes estimated at over \$200-million, put in its bid for a share of the expected savings in 1954—even though UAW contracts technically won't open on wages this year.

Arguments—Unions contend that companies can raise pay or contribute to guaranteed-wage funds out of tax savings this year, without feeling the pinch of added labor costs and without raising prices to offset the increase. The expected savings vary from industry to industry and among companies, but

unions dealing with major companies estimate their employers will save about 10¢ an hour per worker "barring serious economic trouble" in 1954.

Employers say the figuring is not so simple as the unions seem to believe: There are other claims on the savings—if any. Besides, it is economically unsound, they say, to earmark "paper" savings in a period of economic uncertainty.

Under the circumstances, arguments will probably center on these questions:

• Just how big will profits—and tax savings—be in 1954?

• How will they be split up?

This will mean a return to an "ability to pay" negotiating policy—one often shoved aside during the recent bullish years, when emphasis was on continued full production at any cost and when increased labor costs could be passed along to consumers. It may also mean a return to "see the books" demands by unions.

• Tipoff—One of labor's ablest research directors, Solomon Barkin of the Textile Workers Union of America (CIO), indicated that some time ago. Speaking to a group of cost accountants, many

### What's Happening to the Cost of Living

	Total Cost of Living 1947-49 1935-39 = 100	Food 1947-49 1935-39 = 100	Clothing 1947-49 1935-39 = 100	Housing	
				1947-49 Total	Rent Only
December, 1947	102.4	99.9	99.2	98.3	
December, 1948	101.5	104.8	103.7	103.0	
December, 1949	97.7	97.1	104.2	107.0	
December, 1950	107.1	102.2	109.4	110.4	
December, 1951	115.0	108.1	113.9	115.6	
December, 1952	113.8	105.1	116.4	120.7	
January, 1953	113.1	104.6	116.4	121.1	
February	111.5	104.6	116.6	121.5	
March	111.7	104.7	116.8	121.7	
April	111.5	104.6	117.0	122.1	
May	112.1	104.7	117.1	123.0	
June	113.7	104.6	117.4	123.3	
July	113.8	104.4	117.8	123.8	
August	114.1	104.3	118.0	125.1	
September	113.8	105.3	118.4	126.0	
October	113.6	105.5	118.7	126.8	
November	113.0	105.5	118.9	127.3	

Data: U. S. Bureau of Labor Statistics.

BLS' index is now on a revised basis. It is linked to the interim-adjusted index for December, 1952, to form a continuous series both in terms of 1947-49 = 100 and 1935-39 = 100.

© BUSINESS WEEK

of them management employees, Barkin commented:

"If profit margins are considerably narrowed through intense competition and irregular operations . . . financial statements will become more significant in bargaining sessions."

This has already come about in textiles and other hard-pressed branches of industry, he pointed out. Management's ability to pay is now considered "most carefully" by his and other unions in drafting contract demands, and similarly "union demands [are now] examined most closely" by employers in the light of their financial data. Because of this new and important use of financial statements in bargaining, labor and management should get together on the figures, Barkin told the accountants.

• **What Figures?**—In the past, management generally resisted the release of financial reports to unions. There is little indication that its attitude has changed, but unions—by stock purchases and other devices—now have access to about the same information that stockholders receive.

According to Barkin, these statements have "limited usefulness," although they are usually inadequate for collective bargaining. They should be supplemented, he said, because real "ability to pay" bargaining should be based on answers to these questions:

What were the business profits before and after taxes?

What financial benefits did the ownership interests and the employees receive? What gains did the enterprise itself retain?

How does the company's financial experience compare with that of comparable enterprises?

What is the likely future business course in terms of volume of sales, prices, and costs?

What are the present and likely future breakeven points for the business?

• **Escalation**—Meanwhile, although unions are losing interest in the linking of wages and the government's living-cost index (BW-Jan. 2'54, p68), they are holding to one part of their "escalator" pact: the automatic annual-improvement-factor raises, expected to add another 5¢ an hour to wages this year.

The Bureau of Labor Statistics' year-end report on living costs indicates why unions are cooling off on c-of-l clauses. The mid-December figure of 114.9% was a fraction down from November's 115% but still close to a record high of 115.4% in mid-October. But for the year as a whole the index fluctuated in a narrow range, going up just a trifle more than 1%.

# Labor was this plant's big location problem . . .



A manufacturer wanted to locate a plant in the high-income northeast market area. He required a supply of labor large enough, and with sufficiently varied skills, to get into immediate production. Welders, machinists, and female help with adaptability to precision work were especially needed. He got the current information necessary to evaluate labor at several desirable sites, quickly and confidentially, from the Industrial Location Service of the State of New York.

## What's yours?



No matter what your location problems may be, the Industrial Location Service of the State of New York will be glad to get you, confidentially and without obligation, the information you need to solve them.

### YOU CAN GET AUTHORITATIVE DATA ON:

**Raw Materials:** Cost and availability of all materials and supplies you may need.

**Transportation:** Availability of facilities, cost of assembling materials and distributing finished product between any given points.

**Markets:** Industrial and consumer market data.

**Labor:** Availability, skills and rates.

**Power and Fuel:** Character and cost at any point.

**Available Buildings:** Types, condition, facilities and terms. Confidential.

**Sites:** Availability, size, character, installed services; photos and maps. Confidential.

**Community Services:** A complete report on the facilities and attitudes of any community.

**Laws and Regulations:** Full data on laws or regulations applying to any particular form of enterprise.

**FREE BROCHURE AND MAP.** Send for "Industrial Location Services," a full description of the valuable, detailed plant location information New York State will obtain for you. 1953 large-scale physical map of the state and adjacent areas, showing elevations, transportation systems, watersheds, etc., will also be sent. Write New York State Department of Commerce, Room 746, 112 State Street, Albany 7, New York.



**Industrial Location Service of  
New York State**

**"WE DON'T SELL SITES—WE MATCH NEEDS!"**



## T-H Hearings: Big Cast, No Drama

A jam-packed hearing room, whirring television cameras, popping flash bulbs, scores of reporters, and a nearly full Senate Labor Committee greeted President Eisenhower's long-awaited Taft-Hartley act envoy on Capitol Hill.

The furor raised by the preliminary festivities was louder than any reactions to Secretary of Labor James Mitchell (right) as he spelled out 14 Administration proposals for changing the controversial law (BW-Jan. 16 '54, p26).

It was as though the senators were saying to themselves: "Here we go again." Even the first appearance of an Administration representative on the subject failed to stir up the atmosphere. Hearings had been going on ever since the law was passed in 1947—and current indications are that they will bring the same result: no change.

Under these circumstances, Mitchell's cautioning that the Taft-Hartley issue is really a "battle of the professionals" (labor and industry legal experts) and not an issue to the workers, fell flat. Certainly the "professionals" were not particularly moved.

• **One Debate**—Only one issue brought extended discussion. That was the question of requiring an employee's ballot to legitimize a strike.

Paradoxically, the senator who presented the loudest and longest argument against this provision was a Republican who otherwise supports Eisenhower's T-H program. New York's Sen. Irving Ives believes the strike ballot would be "extreme interference" in

union organization, as well as administratively unworkable.

Ives brought up the strike ballot question, anticipating from published reports that Mitchell, too, was opposed to this part of the Eisenhower program. "I don't like to embarrass you . . ." he began, but it was Ives who was somewhat red-faced at the end, because Mitchell came out for the principle of a government-conducted strike ballot.

The secretary was firm, however, in holding that such a vote should be conducted before a walkout, not afterward as Sen. H. Alexander Smith, chairman of the committee, has prescribed in his bill made up of Administration recommendations.

• **The Principle**—For Ives and several Democratic senators who peppered him with questions on the subject, Mitchell was forced to repeat that he was strongly in favor of the principle of the secret government ballot, that some way should be worked out for conducting such a vote.

The argument thrown at Mitchell was that the ballot would be like having stockholders police the activities of a company. Mitchell countered that he couldn't see the comparison, that union members were much more an integral part of the company, and that unions probably wouldn't enjoy the comparison anyway.

• **Democrats' Objections**—Ives was the only Republican to disagree with any provisions offered by the Administration. The Democratic committee mem-

bers were concerned about the ballot, the provision for spelling out states' rights in labor disputes, and employer free speech. Sen. John Kennedy, Massachusetts Democrat, asked whether the proposal to have employers sign the T-H non-Communist oath (as union leaders are required to do) was not a "sop" to the unions.

"To prohibit the rich and poor from sleeping under bridges doesn't mean anything," Kennedy said.

"Except, Senator, the poor don't like sleeping under bridges alone," Mitchell countered.

But even this exchange failed to lighten the hearing as the legislators and Mitchell, who have all become expert on the labor law through years of such hearings, discussed T-H technicalities.

• **No Fruit**—As the hearings moved along through the week, industry representatives appeared with praise for the White House proposals—although with some misgivings. They suggested that six Administration recommendations are "questionable" in the eyes of industry.

Labor leaders, in turn, hit hard at the White House's 14 proposals. CIO reiterated that Eisenhower's program would make T-H "worse than it is."

A feeling that no changes are really vital at this time ran through the sessions as the week advanced. The chances that there will be no amending of the labor law at all this year appeared greater, day by day.



SECRETARY MITCHELL gave the Senate Labor Committee (above) the Administration's views on Taft-Hartley changes.

Why  
**HAMMERMILL**  
**BOND**  
is America's most used bond paper

Secretaries say it . . . . . *types better!*

They turn out neater, easier-to-read letters—with less effort. And the erasure-proof surface takes clean corrections easily.

Businessmen say it . . . . . *looks better!*

Executives like the distinctive look Hammermill Bond gives a letter...the way its brilliant new blue-white invites readership.

Printers say it . . . . . *prints better!*

Printers know they can count on Hammermill Bond for sharp, clean results every time, because this famous paper has had superior printing qualities for 42 years.



You can obtain business printing on Hammermill papers wherever you see the Guild shield on a printer's window. Meantime, write on your business letterhead for a free sample book showing Hammermill Bond in white and colors. Hammermill Paper Company, 1455 East Lake Road, Erie 6, Pennsylvania.

**HAMMERMILL**  
**BOND**

FOR OVER 40 YEARS . . .  
AMERICA'S MOST USED BOND PAPER



# New Look for Inquiry Boards

Eisenhower Administration will skip over some of New Deal-Fair Deal regulars, add new faces in naming arbitrators, fact-finders; new railroad board is example.

There are going to be some new names and new faces on federal labor disputes boards in the future. The Eisenhower Administration has decided to enlarge the stable of arbitrators and fact-finders that the government draws on for special assignments.

The changes will come gradually, not all at once. But the Administration doesn't see why it should have to rely exclusively on the old list of "regulars" developed under the New Deal and Fair Deal.

• **First Run**—The first trial of the new policy came with President Eisenhower's recent appointment of an emergency board in the nonoperating railroad union dispute. The tipoff was the long delay—18 days after declaration of the emergency—in the appointment of the board.

Usually such a board is named within a couple of days, or at most a week, after the President issues his executive order—because under the Railway Labor Act the parties to the dispute are entitled to a report and recommendation within 30 days after the emergency is declared.

In the nonoperating railroad union case, the holidays and the preparation of many messages to Congress contributed to the delay. But the main reason was this: The list of suggested names that the National Mediation Board sent to the White House did not conform to the new policy.

• **Nonpolitical, But New**—The National Mediation Board had submitted a list of "pros"—mostly well-known names in the arbitration profession on the eastern seaboard. There was nothing wrong with them, it is conceded, but they were largely people who had developed under the previous administrations.

Emergency board appointments do not come under the head of political patronage, because arbitrators, fact-finders, and mediators must be acceptable to unions and management. But the Administration saw no reason why it should not develop some new people who were just as acceptable as the old.

Of the three names finally chosen by the President for the railroad board, not more than one at most came from the NMB's recommended list—though only one is actually new to the field of national arbitration.

• **Secretary**—Whether Secretary of Labor James P. Mitchell is responsible for establishing the new policy or not, he is reputed to be enforcing it. This in itself is a new departure in modern

Washington. The Secretary of Labor has ceased to be a figurehead. He holds at least a veto on all proposed appointments to labor posts within the power of the President to fill.

• **Board**—The emergency board finally appointed to hear the dispute between the railroads and 17 nonoperating unions over health and welfare demands and other "fringe" issues includes:

Charles Loring, retired chief justice of the Minnesota Supreme Court.

Judge Adolph E. Wenke of the Nebraska Supreme Court.

Martin P. Catherwood, dean of the New York State School of Industrial and Labor Relations at Cornell.

Only Catherwood is completely new to national arbitration. He had been successively professor of business management, professor of public administration, and commissioner of the New York State Dept. of Commerce before becoming dean at Cornell.

Loring has had considerable experience in railroad disputes, having served as referee for the National Railroad Adjustment Board a number of times. He retired recently to Arizona. He is 79, generally regarded as a conservative Republican, and very able.

Judge Wenke, a Democrat, has served on three or four emergency and railroad arbitration boards.

Judges in midwestern and western states are called on more frequently for this type of service than are eastern judges. They are more available, perhaps, because their judicial salaries are less lucrative.

• **Fraternity**—Both Loring and Wenke are members of the National Academy of Arbitrators, a professional organization that its members often call "the fraternity," and that is sometimes referred to jestingly as "the closed shop."

Actually, the Academy is open to anyone who attains acceptability in arbitration, but those regularly engaged in this work, like those in other professions, appreciate the economic and prestige advantages of a limited membership list. Like many another organization, the Academy has an influential core, made up of professional arbitrators and based largely on long association and friendship. Neither Loring nor Wenke belongs to this group.

• **Laments**—At the Academy's annual meeting in Washington last week, there was considerable lugubrious conversation about the Administration's passing over veterans such as George Taylor,

David L. Cole, William M. Leiserson, Aaron Horvitz, and others. Even the younger crop of arbitrators—including among others Saul Wallen, Ralph Seward, and John Dunlop—will have to "share the work" with new faces, if they get any at all.

In one sense, the veteran, successful arbitrators are quite content to pass up appointment to government emergency boards and the like. These are the least lucrative of assignments. On the other hand, they carry recognition and satisfactions, and the veterans like to feel they are needed and wanted in the public service once in a while.

• **Limited**—There are not a great many of these jobs in a year, but that is one of the things that make them more or less coveted. In the fiscal year 1953, the records show, four emergency boards were set up in the railroad and airline industries. That, of course, was a fairly quiet year for labor-management relations. The railroads and the unions were operating under three-year contracts.

In the first year of the Eisenhower Administration, the Taft-Hartley national emergency section, providing for a board of inquiry, was invoked only once.

The National Mediation Board has other arbitration jobs to distribute, however. Though there were only four emergency boards in fiscal 1953, there were, in all, 10 boards of arbitration in the railroad and airline industries. The parties frequently select their own arbitrators under this procedure, but when they cannot agree, the Mediation Board designates one.

The board also makes some referee assignments to decide grievance issues.

## LABOR BRIEFS

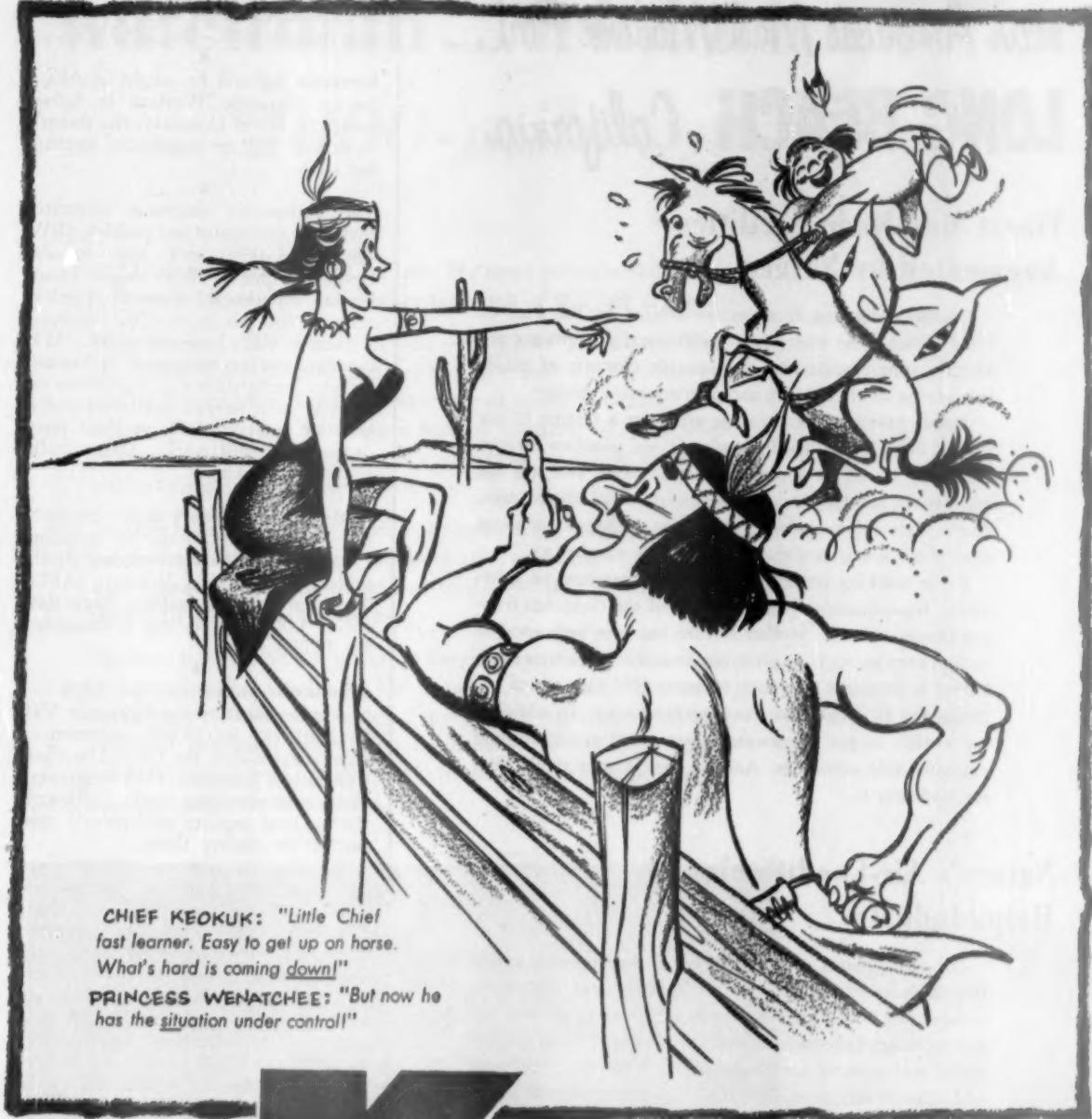
Administration proposals on social security, health, and unemployment compensation are "disappointing" to CIO—although it notes that some of the President's suggestions "go further than his party has been willing to move in the past." CIO urges bigger social-security increases than proposed, less state handling of jobless pay.

Peace pact signed by two AFL craft unions, the Boilermakers and Iron Workers, ends a 25-year jurisdictional feud. The agreement redefines the work that members of each union will do in a confused, frequently-overlapping field.

AFL-CIO pact to end raiding hangs in the balance as AFL's Teamsters sifts "hundreds of reports" of violations of its jurisdiction—mostly by CIO unions. According to president Dave Beck, the

SITUATION UNDER CONTROL

BY KEOKUK



CHIEF KEOKUK: "Little Chief fast learner. Easy to get up on horse. What's hard is coming down!"

PRINCESS WENATCHEE: "But now he has the situation under control!"

KEOKUK



ELECTRO-METAL COMPANY

KEOKUK, IOWA

WENATCHEE DIVISION, WENATCHEE, WASHINGTON



Keokuk Silvery . . . the superior form of silicon introduction for steel plants and foundries . . . available in 60 and 30 lb. pigs and 12½ lb. piglets . . . in regular or alloy analysis. Keokuk also manufactures high silicon metal.

Control both quality and costs with Keokuk Silvery Pig Iron! Being a less concentrated form of silicon, Keokuk holds silicon loss to a minimum. Car for car, pig for pig, its uniformity never varies. Charge Keokuk by magnet or count!

SALES AGENT: MILLER AND COMPANY

332 S. Michigan Ave., Chicago 4, Illinois  
3504 Carew Tower, Cincinnati 2, Ohio  
407 N. Eighth St., St. Louis 1, Missouri

# LOCATE YOUR PLANT near America's Most Modern Port **LONG BEACH, California**

## Finest Man-Made Facilities Augmented by Nature

Excellent shipping facilities are offered by the Port of Long Beach. The many fine mechanical advantages are happily supplemented by the equable climate, of major importance to all shippers and offering many savings.

Ample paved outdoor storage areas are a feature of the Port of Long Beach. During peak periods, overflow cargoes are safely stored outdoors. At various times you will see hundreds of automobiles, tons of steel products, citrus fruits, cotton bales and many other shipments in the open without need of our fine transit sheds and shipside warehouses.

Better working conditions, no frozen cargoes, no slowdowns from excessive heat are a few of the dividends from our famous climate. Mother Nature has been very good to us. But even so, we have given her an assist. The entire outer harbor is protected by a solid-fill mole 600' wide which has eliminated all rough water and resulting surge. In addition, the world's longest breakwater gives added protection and extensive safe anchorage. And we have a very gentle tidal range of only 6'.

## Nature's Air-Conditioning Helps Industry

Industrial plants also benefit from the air-conditioning that is done by nature. The air is fresh, and cleared by invigorating ocean breezes. Mechanical cooling devices are not necessary (except for critical processing). The excellent living and working conditions result in lower absenteeism and reduced turn-over, as well as higher working efficiency.

The "industrial climate" also offers fair weather the year round. Really low-cost utilities, advantageous tax-structure, lower costs for land and building, an exceptional labor pool, excellent transportation facilities and America's most modern port—all add up to sunshine on your profit ledger.

**Write for free industrial brochure and complete details—in confidence, if you like. This invitation is extended by the City of Long Beach and its Board of Harbor Commissioners.**

CHAMBER OF COMMERCE • DEPARTMENT OF INDUSTRY

200 East Ocean Boulevard, Long Beach 2, California

Teamsters executive council "will call attorneys in to diagnose the whole situation before it sets Teamsters policy"—either to ratify or to reject the AFL-CIO no-raiding agreement. If rejected by the Teamsters, the whole peace plan may collapse (BW—Dec. 26 '53, p74).

Severance pay will be sought by AFL's Ladies' Garment Workers in future contracts, David Dubinsky, the union's president, told an employers' meeting last week.

The Univac—an electronic computer that can solve almost any problem (BW—Sep. 19 '53, p154)—isn't able to decipher this puzzle: Who should install Univac equipment? General Electric assigned the job to its CIO electrical workers at GE's Louisville plant. AFL electrical workers employed by Turner-Struck Construction Co., contractor on the GE plant project, said the installation job was rightfully in their jurisdiction—and quit work. Other crafts continued working.

**Birthdays are holidays** under contracts being signed in Chicago by sprawling Local 1031 of the International Brotherhood of Electrical Workers (AFL). The local's birthday-holiday clause now covers 4,000 workers and is demanded for 33,000 more.

Contractors protest that pay hikes (up to 15¢ an hour) by the Tennessee Valley Authority for 14,000 craftsmen in eight states violate the Bacon-Davis act. Contractors complain TVA is ignoring "wage rates prevailing locally," although Bacon-Davis requires public-works contractors to observe them.

The boss' wife, 19-year-old son, and one other employee picketed a St. Louis Venetian blind manufacturer recently. The wife, Mrs. George Harrison, said she had worked for eight years without pay; the son complained he couldn't get married on 75¢ an hour. Along with a girl plant worker, they joined AFL's carpenters and struck for union pay rates: \$1.47 for the women, \$1.75 for the son. Harrison refused to bargain.

**The Pictures**—Amer. Telephone & Telegraph—108 (bot.); Floyd Bright—100; Harry Compton—28 (3rd from top); the DoAll Co.—80 (bot.); Federal Products Corp.—79; Herb Kratovil—Cover, 28 (all except 3rd from top), 29, 30, 31, 54, 84; The Glenn L. Martin Co.—62; Micro Specialties Co.—80 (top); Robert Phillips—128, 129; Progressive Architecture—66, 67; Dan Weiner-Brackman Assoc.—63; W. W.—118; George Woodruff—108 (top).

# Watchman...with a 1000-mile reach

NO slow rounds on foot for him. He must patrol a thousand miles of oil pipeline—every last inch of it...all at once.

How can one man in one place do such a job? The answer lies in a remarkable network of micro-wave and VHF radio... giving the watchman a precise picture of operations along the entire line, giving him push-button control of pumping pressure and rates of flow, keeping him in direct contact with roving maintenance crews.

In this combined communications-control network, Mallory precision-built electronic components—capacitors, resistors and vibrators—are fundamental to dependable performance under all operating conditions.

Mallory has earned a reputation for quality that is unexcelled in the specialized fields of electronics, electrochemistry and metallurgy. Mallory products, specialized engineering abilities and precision production facilities in those fields offer manufacturers real opportunity to improve their products... thus improve their sales.



## MALLORY

SERVING INDUSTRY WITH THESE PRODUCTS

Electromechanical • Resistors, Switches, Television Tuners, Vibrators  
Electrochemical • Capacitors, Rectifiers, Mercury Batteries  
Metallurgical • Contacts, Special Metals and Ceramics, Welding Materials

P.R. MALLORY & CO. Inc., INDIANAPOLIS 6, INDIANA



*Wyandotte Chemicals Research Bldg. Architect: Stanton & Hillier. Consulting Engineer: George Wagschal Assoc. Contractor: Walbridge-Aldinger Co.*

# Better Air for tomorrow's chemical research

**Wyandotte Chemicals Corp.  
chooses American Blower equipment  
for new multi-million dollar  
research building**



American Blower Series 81 Sirocco Fan. All Sirocco Fan ratings are certified in accordance with the Standard Test Code.



**Individual** laboratory exhaust fans (rubber covered and corrosion resistant) have two speeds: slow for normal exhaust; high for experimental work. This allows the chemist to completely control room and hood ventilation.



**Secondary air** is supplied by an American Blower HHS fan with humidifier and dehumidifier, heating and cooling coils. Fan in foreground is American Blower utility set used to ventilate hard-to-reach areas such as stairways, etc.

AMERICAN BLOWER CORP., DETROIT 32, MICH. • CANADIAN SIROCCO CO., LTD., WINDSOR, ONT.  
Division of American Radiator & Standard Sanitary Corporation

**AMERICAN**  **BLOWER**

*Serving home and industry: AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS • SUNBEAM AIR CONDITIONERS*

# PERSONAL BUSINESS

BUSINESS WEEK  
JAN. 30, 1954



A BUSINESS WEEK

SERVICE

Now you can get a pretty good idea of how deep the changes in the tax law will run. The House Ways & Means Committee has decided on several revisions that are likely to become law before long.

Most of the changes will mean a general easing of your tax burden. But don't look for any across-the-board cuts. The softer tax blow will come instead in a relaxation of some of the stiffer provisions.

Not every revision will be to your benefit. Expect some toughening here and there, plus some skillful loophole plugging. The over-all result should be a code with several of the obvious inequities smoothed out.

Here are some of the proposed changes that stand the best chance of being written into the law:

- **Dividends.** The so-called "double tax" will still be with us—but on a reduced scale. Changes would bring \$240-million of tax relief to stockholders in fiscal 1955, \$500-million in 1956. Here's how it would work:

On your 1954 return, the first \$50 in dividends would be tax-free. On top of that, you could deduct from your final tax 5% of all dividends in excess of \$50. For example: Say you get \$2,050 in dividends. You pay no tax on the first \$50. You also subtract 5% of the remaining \$2,000 (\$100) from the tax you owe for the year.

Relief would double in calendar 1955—you get an exemption of \$100, plus a 10% credit against the final tax of dividends in excess of that. For 1956 and thereafter, the exemption would remain at \$100, but the deduction against the final tax would rise to 15%.

- **Alimony.** You can now deduct alimony or separate-maintenance payments only if you are divorced or separated under a court decree. The new law would allow you to deduct payments made to your wife if living apart from her but not separated under a court decree—and provided you did not file a joint return with her.

- **Life insurance installment interest.** The bill would plug a loophole here. Interest as part of installments, which insurance funds earn after the death of the insured, is now tax-free. The committee would tax this interest if the policy is for more than \$50,000.

- **Annuities.** These are now taxed under the "3% rule"—that is, only 3% of the total cost is regarded as taxable income every year. Thus if your annuity cost \$10,000, and you get \$2,000 a year from it, 3% of the \$10,000—or \$300—is taxed each year as income. Anything over that is excluded.

But note that this exclusion is good only until your total excluded payments reach the cost of the annuity. After that, you pay tax on the full \$2,000 you get each year.

The committee would replace this with a new yardstick. Your annual exclusion would equal the total cost of the annuity divided by your life expectancy at the time payments begin.

This exclusion would remain in force even if you outlive your life expectancy. Thus you never would pay a tax on the full amount you receive in any one year.

- **Dependency exemption.** If your child earns more than the present \$600 limitation, you would still be able to claim the \$600 exemption. That's

# PERSONAL BUSINESS (Continued)

BUSINESS WEEK  
JAN. 30, 1954

provided you contribute more than half the support, and the dependent is not over 19 years old, or is a student.

• **Real-estate taxes.** Present law says that only the seller can take the taxes against property as a deduction—if he has actually paid the tax. The committee's proposal would let the buyer and seller divvy up the deduction in proportion to the actual burden of the tax borne by each.

• **Theft losses.** You can take these now only in the year in which the loss was incurred. The new law would permit deduction in the year the loss was discovered.

• **Medical expenses.** Now you can deduct only those expenses that run more than 5% of your adjusted gross income. The committee has lowered this limitation to 3%.

Also, the new law would double the maximum limits for medical-expense deduction.

A deceased person's medical expenses can be deducted, even if paid by the estate. But they must be taken within one year after his death—and not taken as an estate-tax deduction.

—•—

Hunters and fishermen should keep an eye on current developments in their state legislatures.

A lot of conservation laws are being considered in many states. Some of them are restrictive; others tend toward easing fish-and-game laws.

Colorado, for example, is concentrating on stocking of streams. One bill would appropriate \$300,000 for use by the state to purchase rainbow trout from private hatcheries. Another asks a special appropriation of nearly \$500,000 for state fish-hatchery development.

Connecticut has already liberalized some fishing regulations. The state now allows year-round fishing for calico bass, bullheads, yellow perch, and white perch; no length or daily limit. Also, the season for northern pike, perch, and chain pickerel now runs from Apr. 16 to Feb. 9.

Michigan legislation proposes boosting license fees by at least 25%. There's also some agitation to require residents to buy licenses to fish in the Great Lakes.

—•—

A new polio weapon may be at hand. Besides the large-scale tests of a new vaccine to be made next summer, there may also be a laboratory test that will give an accurate polio diagnosis within 12 hours.

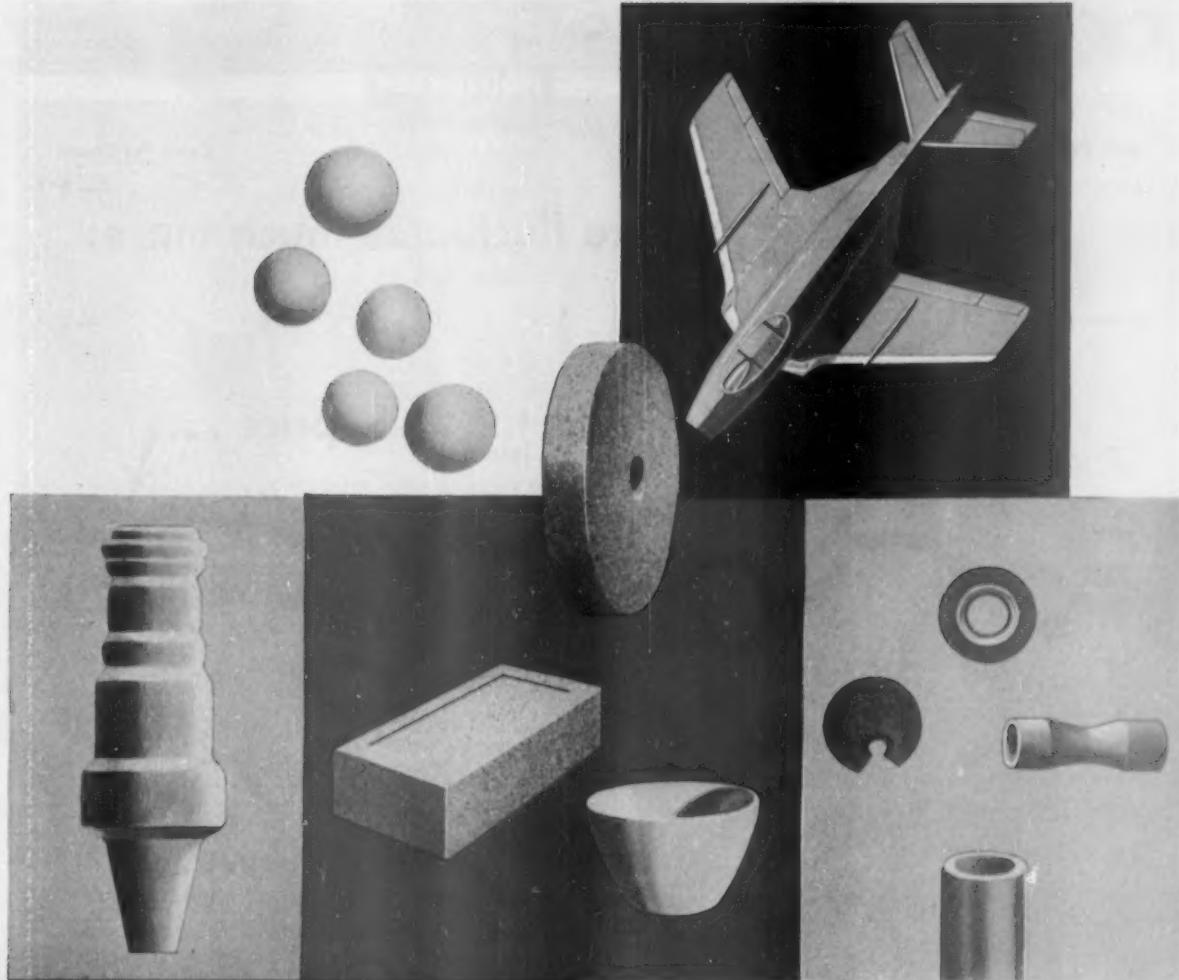
Polio has always been hard to diagnose correctly in its early stages. University of Minnesota scientists have discovered that cultures of certain cells will react quickly to the polio virus, so accurate diagnosis is possible.

National Foundation for Infantile Paralysis has backed the research with grants. With its aid, scientists are trying to prepare large quantities of the test-tube cultures for use by hospitals and laboratories next summer.

—•—

Latest reissue of music by the old swing bands is an Artie Shaw album, to be released next week by RCA-Victor. It consists of 24 tunes recorded from Shaw radio broadcasts in 1938 and 1939. You can get it—for \$8.95—either on two 12-in. LP records, or six 45 rpm. records.

Copyrighted material used under the general copyright on the Jan. 30, 1954, issue—Business Week, 380 W. 42nd St., New York, N. Y.



## Are Alcoa Aluminas in your success story?

It only takes a little imagination about ALCOA Aluminas to write ceramic success stories today, as scores of manufacturers have proved recently.

For example, the development of the jet engine was substantially aided by aluminum oxide insulators. Ordinary insulators simply couldn't take the heat.

Ceramic pump parts and pipe linings of 85-95 per cent alumina provide such good abrasion resistance that they are used where once even strong

metals failed. Used as a filler, alumina adds strength to synthetic resin dies for forming steel parts. Ceramic thread guides have set new performance records.

Other examples of products which have been measurably improved by the addition of ALCOA Alumina include: refractory brick, laboratory ware, grinding balls, electrical insulators, glassware, enamels, glazes, ceramic tile, bearings and concrete.

Alumina ceramics now serve in applications unheard of a few years ago . . . have helped to build whole new industries. Why not let them write a success story for you? Maybe we can show you how. Write to ALUMINUM COMPANY OF AMERICA, CHEMICALS DIVISION, 700-A Alcoa Building, Pittsburgh 19, Pennsylvania.

**ALCOA**  
**CHEMICALS**

ALUMINUM COMPANY OF AMERICA



# COMMODITIES

Cents Per Pound

Cents Per Pound

8 —

— 8

**The world sugar price fluctuates much more...**

7 —

— 7

**...than the U.S. price ...**

6 —

— 6

5 —

— 5

4 —

— 4

3 —

— 3

**...and now is much lower**

2 —

— 2

1950

1951

1952

1953

Data: Dept. of Agriculture

BUSINESS WEEK

## New Pact May Sweeten World Price

Except in time of war, the world has a chronic oversupply of sugar. Since the early 1900s governments, both individually and collectively, have been trying to do something about it.

The latest attempt is the International Sugar Agreement, reached in London last August. The U.S. Senate is slated to take up the agreement in the current session; ratification seems about as sure as Senate ratification of any international agreement can be.

One reason ratification seems so sure is that, initially at least, the agreement should make no difference at all to the U.S. sugar market. There are two prices for sugar: the "world" price, which has been sagging badly under the weight of a series of bumper crops in various countries, and the U.S. price, which has been holding up in a market tightly sealed off from the rest of the

world by a system all its own of quotas, controls, and allocations (chart).

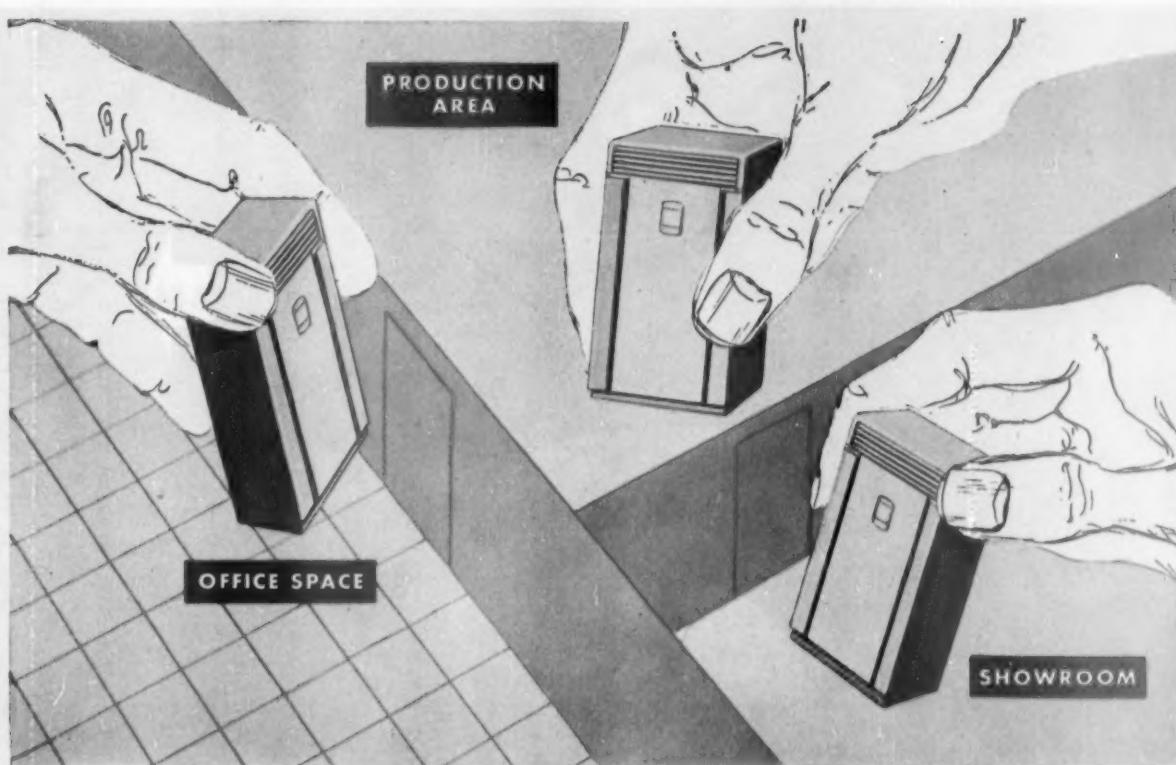
• **Estimate**—Here is how the U.S. system works—all based on the Sugar Act of 1948: In December of each year, the Secretary of Agriculture, after public hearings, estimates how much sugar will be needed in the U.S. during the coming year. This amount then becomes the total supply that can be sold during the year.

In making his estimate the Secretary considers consumption during the previous year, estimated changes in population and demand, and estimated inventories at the turn of the year. But one overriding consideration, according to the Sugar Act, is that the price of sugar should not be "excessive to consumers," and yet should be high enough to "protect the welfare of the domestic sugar industry."

At the turn of the year, if the Secretary thinks the price is too high, he will set a high figure for U.S. requirements; this will increase the supply, and thus lower the price. If he feels the price has been too low, he will tighten the reins on supply. He can also revise his original estimate of needs at any time during the year. All this means that at the Secretary's discretion U.S. sugar prices can fluctuate only within a comparatively narrow range.

• **Quotas**—Once the Secretary has fixed the supply, the quota system goes into effect, giving each of the various sources of supply its share of the market. Domestic sugar-producing areas (the mainland, Hawaii, Puerto Rico, and the Virgin Islands) and the Philippines get "fixed" quotas—the same amount year after year.

These total 5.4-million tons, or



## HOW to COOL on a BUDGET

New G-E Step-by-Step Plan lets you air condition key areas first, extend it later  
to fit your needs. **EARLY-SEASON SAVINGS IF YOU ACT NOW!**

**Right now**—with a minimum investment—you can start sharing the impressive dividends that air conditioning earns for businessmen. You can install it **first** where you need it **most**: for example, in your laboratory...showroom...machine shop...conference room. Then as time goes on and more money becomes available, you can air condition other areas—one by one!

**Key to New G-E Step-by-Step Plan** is the new G-E Packaged Air Conditioner, latest achievement of G-E engineering and research. It gives Management true air conditioning (not just cooling or ventilation) plus new freedom to gear its modernization program to the company's financial program.

### Check these 8 Advantages of G-E Packaged Air Conditioning

1. **CUTS COSTLY BUILDING ALTERATIONS** and long duct-runs.
2. **MODEST INITIAL OUTLAY** for equipment. Buy an additional Air Conditioner only when you know you can afford it.
3. **QUICK AND EASY INSTALLATION.** Installed with practically no disturbance of your normal operations.
4. **PERMITS PARTIAL OPERATION.** Operate units only where space is occupied.
5. **LOCAL CONTROL OF TEMPERATURE.** Each department can adjust temperature to meet its individual needs.
6. **PREVENTS TOTAL COOLING SHUTDOWN.** Any service difficulties do not cause complete

discomfort or stoppage of production.

7. **ADAPTABLE.** Allows rearrangement of office, plant or store layouts any time.

8. **FIVE-YEAR PROTECTION PLAN.** Factory-sealed and tested, G.E.'s all-in-one cooling system is so trouble-free that G.E. provides a full 5-year warranty on the complete refrigeration cycle.

**G.E.'s Early-Bird Sale** offers you special off-season price and deferred payment plan for a limited time only.

Call your G-E dealer today...or write to General Electric Company, Commercial Products Dept., Sec. B-2, Air Conditioning Division, Bloomfield, N. J. We'll send you our free informative booklet "Air Conditioning Step-by-Step to Fit Your Budget."

  
**Packaged  
AIR CONDITIONERS**  
FOR BUSINESS AND INDUSTRY

### HAVE YOU SEEN THE MOST ADVANCED WATER COOLER ON THE MARKET?

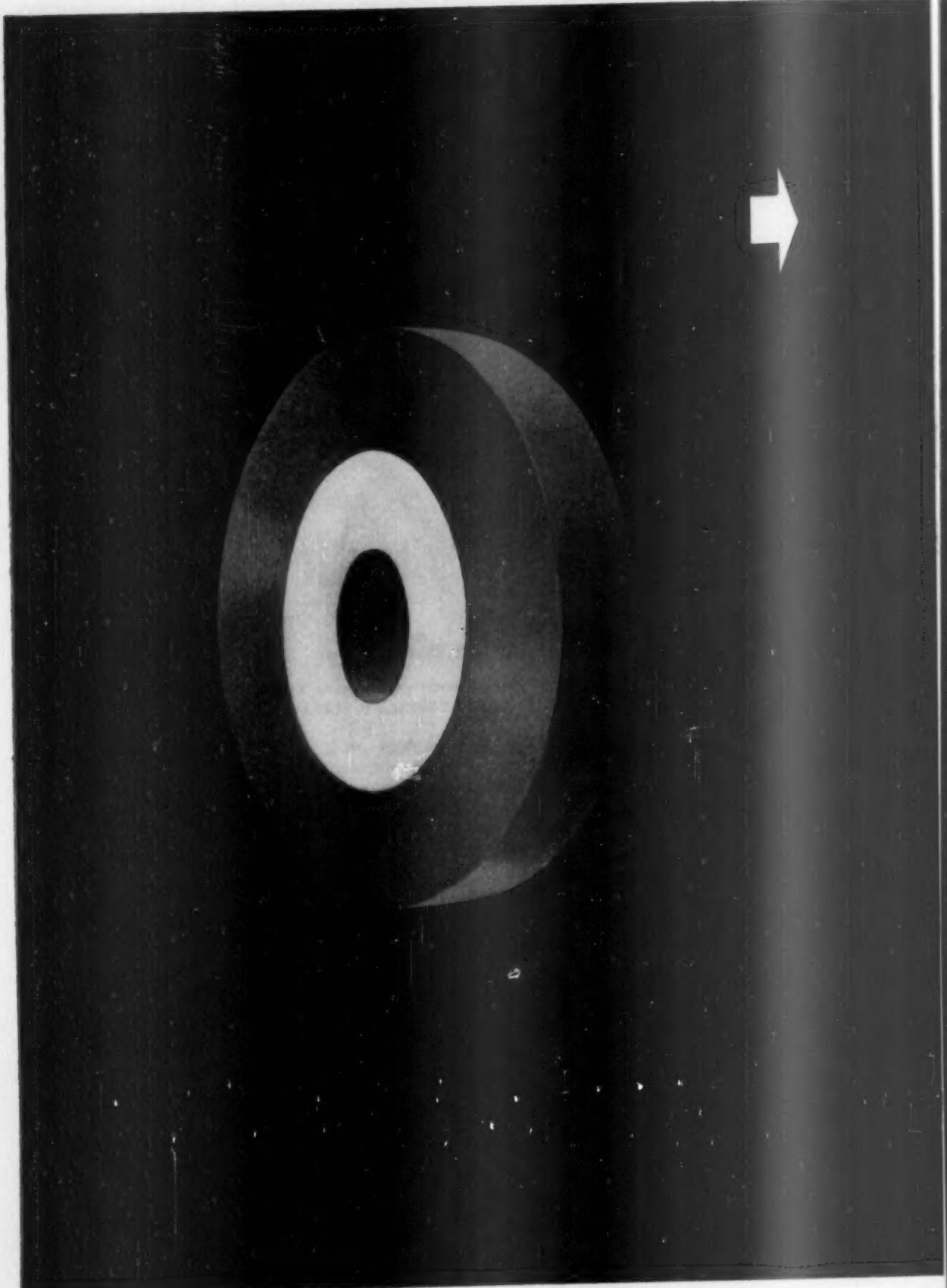
#### CHECK THESE FEATURES—

- Cool, fresh water always
- 30% saving in floor space
- Beautiful modern design
- G-E 5-Year Protection Plan
- Dependable G-E refrigerator compressor

Famous G-E Work Center Plan shows how to increase employee efficiency and save cash with G-E water coolers. Write for more information!



**GENERAL**  **ELECTRIC**



## **HIDDEN HENCHMAN . . .**

Early man used Nature's rocks and stones to shape and sharpen his crude tools and weapons. Today, industry has at its command abrasives that will do in seconds jobs that formerly required days of tedious toil.

Yet relatively few people know or appreciate the vital labor-saving, back-stage role which abrasives play in the production of practically all mechanically finished articles.

## **MAN-MADE MINERALS . . .**

Through the centuries man's ceaseless search for better abrasives has paralleled progress in production. Wheel-shaped sandstones replaced rocks . . . only to give way to emery and corundum, which were sieved, sized, glued to paper and cloth or bonded in pottery mixtures to form artificial grinding wheels.

But it was by the discovery of silicon carbide and crystalline fused alumina—man-made minerals from the electric furnace—that the grinding wheel became a high speed, precision production tool.

## **AMERICA WORKS LIKE THAT . . .**

Industry's insatiable desire to improve its products and make them available at lower cost has sparked the specialized skills and knowledge of a myriad of men . . . has led to the development of thousands of different styles and types of abrasive products for innumerable industrial applications.

America can work like that because it has an all-seeing, all-hearing and reporting Inter-Communications System.

## **THE AMERICAN INTER-COM SYSTEM . . .**

Complete communication is the function, the unique contribution of the American business press . . . a great group of specially edited magazines devoted to the specialized work areas of men who want to manage better, design better, manufacture better, research better, sell better, buy better.

## **COMMUNICATION IS OUR BUSINESS . . .**

The McGraw-Hill publications are a part of this American Inter-Communications system. As publishers, we know the consuming insistence of editors on analyzing, interpreting and reporting worthwhile ideas. We know that businessmen, in order to keep abreast of their jobs, subscribe to—pay for—McGraw-Hill magazines edited for their specific business interests.

And, as publishers, we make the advertising pages of our magazines available to advertisers for featuring the products and services they offer in the interest of increased efficiency and lower production costs . . .

. . . for the editorial pages tell "how" and the advertising pages tell "with what".

## **McGRAW-HILL PUBLISHING COMPANY, INC.**



330 WEST 42nd STREET, NEW YORK 36, N.Y.



HEADQUARTERS FOR BUSINESS INFORMATION





TIME-STUDY MAN BRIEFS THE PRESIDENT

## "Our analysis shows Farval has saved us \$3779"

**I**n a midwestern breakfast cereal plant, the time-study man ran a lubrication check on twenty flaking mills. Ten were oiled by hand, the other ten by a Farval Centralized Lubrication System.

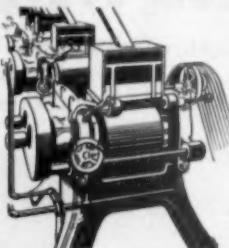
"In 15 months, lubrication of our hand-oiled mills consumed 2,340 hours. Bearing failures were frequent. In contrast, the ten Farvalized mills ran without a bearing failure, saved us \$2,925 in hand-oiling labor and \$854 in power. The power savings alone paid for the entire Farval system."

Result of this experience: Farval went on other equipment.

Farval is the Dualine system of centralized lubrication that hydraulically delivers oil or grease, exactly measured, to each individual bearing, as often as desired. Today Farval systems protect millions of industrial bearings throughout the world.

**FREE LUBRICATION SURVEY**—Without obligation, let us send one of our lubrication engineers to inspect your plant equipment and present a written

analysis of what Farval can do for you. The savings possible will surprise you! Just mail the coupon or write us a note.



**KEYS TO ADEQUATE LUBRICATION**—Wherever you see the sign of Farval—the familiar valve manifolds, dual lubricant lines and central pumping station—you know a machine is being properly lubricated.

Above: Farval-equipped flaking mills discussed at left. At top—time study man is demonstrating how a Farval automatic pumping station works. Adequate lubrication reduces bearing friction, which lowers consumption of power to run the mills. Farval handles either oil or grease, is available with both manual and automatic pumping systems. *Farval is an affiliate of The Cleveland Worm & Gear Co. Manufacturers of industrial worm gearing.*



The Farval Corporation, 3284P East 80th Street, Cleveland 4, Ohio.  
Send Farval Bulletin 25 and details of your free lubrication survey.

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

roughly two-thirds of the U.S. supply. The remainder varies with the estimate of total requirements. The Cuban quota is 96% of this variable amount; other foreign countries get 4%.

The trouble is that, given the pressure of great enough supplies, even the most elaborate system of market allocation will break down. The individual producers will rush their sugar into the market, in order to get it sold before the quotas are filled, thus providing a temporary glut. To combat this, the quota system that sets up the amount for each area is bolstered up by still another system of controls.

• **Marketing**—If the supply from any area, either domestic or foreign, is great enough to cause "disorderly marketing," the Secretary of Agriculture can set marketing quotas, giving each individual marketer or importer his share of the area quota. For domestic areas, the Secretary can also divide the market among individual farms, by acreage allotments, to reduce production. Both acreage and marketing restrictions are in effect now on cane; the Agriculture Dept. held meetings last week to discuss marketing restrictions on beets.

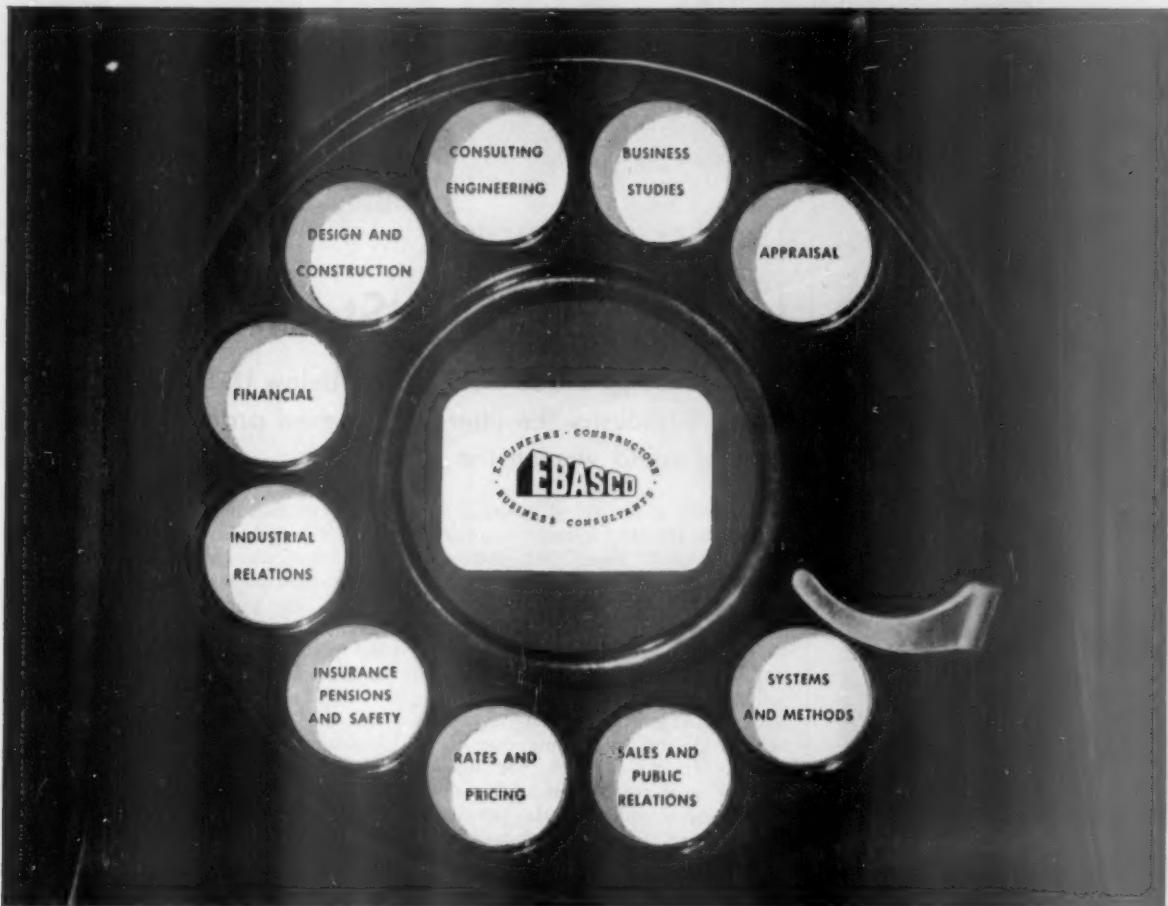
Growers of sugar cane and beet also receive direct subsidies from the government. These payments are conditional, in part, on the growers sticking to acreage allotment.

Many big sugar processors both grow their own sugar beet and cane, and buy from other growers. The Secretary of Agriculture sets each year a "fair" price for sugar beet and cane. The grower-processors have to pay this price on what they buy from other growers in order to get government payments on what they grow themselves. This situation covers so large a share of the market that sugar beet and cane prices stay pretty close to these "fair" levels.

• **International Pact**—All this means that the U.S. sugar market is about as regulated as a market can be. How does this tie in with the International Sugar Agreement?

The agreement provides an international quota system for regulating exports of sugar to the "free" market. This "free" market consists of that part of the world's export trade in sugar that is not given some kind of protection or preference by importing countries. Since most other countries of the world also have some form of control over their sugar markets, the agreement covers only about 5-million tons a year, out of total world exports of about 12-million tons.

As an importer, the U.S. would have one main obligation under the agreement—it would have to restrict its imports from nonparticipating countries to the average of its imports from those countries in 1951-1953. But "fixed" quota production isn't covered, nor are



## When you call for these services in 1954....

In the year ahead, chances are your firm will need services like these. Since few companies maintain staffs large enough to include specialists in all these fields, more and more management men are finding that the best way to get the assistance they need is to call an organization like Ebasco.

For when you call Ebasco, you call a team of specialists—engineers, constructors, business consultants—men whose technical talents are at a premium in today's tight manpower market. They provide you with the service your particular problem requires—and do it without adding to your permanent payroll, overburdening your busy staff or wasting the valuable time of your top executives.

Next time a need arises in your company for special assistance in any phase of business operations, ask your operator to connect you with Ebasco.



*For more details on how you can put this reservoir of experience to work for you, write for your free copy of "The Inside Story of Outside Help." Address: Ebasco Services Incorporated, Dept. C, Two Rector Street, New York 6, N. Y.*

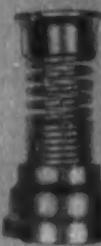
NEW YORK • CHICAGO • WASHINGTON, D. C.

Appraisal • Budget • Business Studies • Consulting Engineering  
Design & Construction • Financial • Industrial Relations • Inspection & Expediting • Insurance, Pensions and Safety • Purchasing Rates & Pricing • Research Sales & Public Relations • Space Planning • Systems & Methods Tax • Traffic • Washington Office



*Ebasco Teamwork gets things done anywhere in the world*

## Induction Heating is a COST SAVER



Production per-operator of soldered spring assemblies was increased 330% with induction heating at Pyle National Company, Chicago.

LINDBERG ENGINEERING COMPANY  
2450 W. Hubbard Street, Chicago 12, Illinois

**LINDBERG**  
**HEAT FOR INDUSTRY**

no other organization in the world  
covers the field so completely

## RAISE WORKER EFFICIENCY BY REDUCING PLANT NOISE

Plant noise not only fatigues workers but can result in compensation claims for industrial deafness. Executive efficiency also goes down when machine noise and vibration disturb offices.

New Leveling Barrymounts prevent the transmission of noise and vibration throughout the building, because machines mounted on Leveling Barrymounts are isolated from the floor. These mountings are so efficient they don't have to be lagged or cemented to the floor — machines mounted on them will not walk.

Write today for your free copy of "LOOK — NO LAGGING!" And learn what the new Leveling Barrymounts can mean in profits to YOU.

**THE BARRY CORP.**

786 Pleasant Street  
Watertown, Massachusetts

imports from Cuba, since Cuban sugar comes in under a preferential tariff. So the maximum immediate effect the agreement can have on U.S. supplies is to restrict imports from the rest of the "variable" quota countries—those that give us 4% of our supplies. Even this would happen only if a nonparticipating country should happen to be within that group.

- **Normal Range**—The agreement sets up a "normal" range of world sugar

prices of \$3.25 to \$4.35 per 100 lb. If prices fall below the minimum, export quotas are reduced; if they go above the maximum, quotas are increased.

The U.S. sugar price is now well above the upper price limit mentioned in the agreement. From the long-range point of view, however, if the agreement works, higher world sugar prices could well exert an upward pressure, chiefly psychological, on prices in the U.S.

## Imports Worry Steel Men

Foreign-made steel, selling below U.S. prices, is giving U.S. industry the jitters. Increased production facilities abroad could worsen the situation.

Up until a couple of months ago, nobody in the steel industry was particularly worried about the increasing amounts of foreign-made steel that have been coming into the country.

Back in 1951, for example, when there was a critical steel shortage, the industry looked upon imports as a pain killing device—something to take the heat off. At that time, foreign steel was selling at stiff premiums over U.S. prices. Today, however, the steel is coming in at cut-rate prices that make mill men shudder. Early last week, members of the New York section of the American Steel Warehouse Assn. went into a huddle to try to ferret out the answer.

- **Headaches**—Actually, the volume of steel imports is still small. In the first nine months of 1953, 1.5-million net tons of steel products were imported as compared with U.S. production of 61.8-million net tons of finished steel products in the same period. Although the 1953 imports showed a 93% increase over 1952 imports, they were still a good bit under the 1951 level.

Another aspect worrying steel men is a series of World Bank loans that will substantially increase production facilities abroad. Sample loans: Italy, a total of more than \$18-million; Belgium, \$16-million; India, \$31.5-million; Luxembourg, \$12-million; Mexico, a total of over \$22-million. The new steel that will come on the world market as a result of these projects can't help but give steel men here bigger and bigger headaches, they feel.

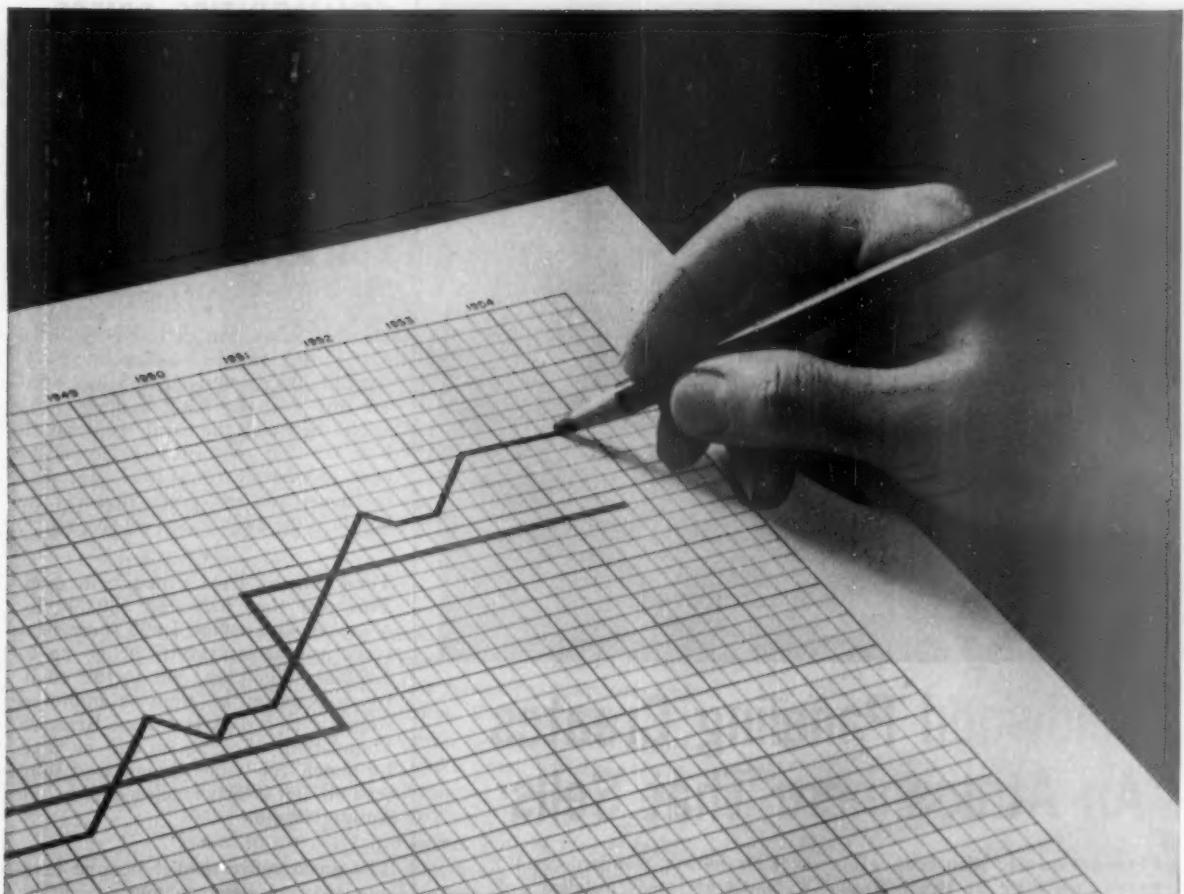
- **Local Problems**—Warehouse operators on the East Coast are doing most of the worrying about the current situation because that section of the country is getting the bulk of the foreign steel. By and large, it's the smaller warehouses that handle the foreign steel, and they're giving troublesome local competition to those warehouses that handle only domestic products.

Houses that handle both foreign and domestic steel also have their problems. If a warehouse operator has a stock of foreign and domestic bars, for example, with a big price differential between the two, he's liable to have to push the price on the domestic bars down in order to move them.

Until recently, importers were content to sell direct to consumers or to warehouses in port cities. But foreign steel now is low enough in price so that, in many cases, it can absorb the freight westward and still sell at a profit. It's an open secret in the trade that warehouses in or close to the steelmaking centers are now being offered foreign steel at prices from \$20 to \$40 per ton less than what they are paying for U.S. steel of certain types. It isn't hard to imagine how steel producers feel about these offerings being made in their own backyard.

- **Cheaters**—Steel producers and warehousemen remember the big influx of foreign steel in the mid-1930s, and their fight to require all imported steel to bear the maker's stamp at 2-ft. intervals. This was finally watered down to requiring the stamp to appear in the first and last two inches. But this raises another problem: unscrupulous dealers can get around this requirement by snipping off the markers and selling the steel as domestic for domestic prices.

- **Quality Counts**—Though they find the price of foreign steel attractive, U.S. manufacturers prefer the domestic products for several reasons. For one thing, it's generally agreed that domestic steel is of a higher quality; for some uses, this can make an important difference. Domestic makers tend to give an extra margin of quality over precise specifications, which foreign makers, on the whole, do not give. Also, if there's any mix-up on a foreign order, it takes at least three months to straighten it out, and buyers don't like to get mixed up in that kind of red tape.



## Caution: dangerous curves

**Keeping your fire protection properly balanced with changes in processes as well as ups and downs in production is vital to efficient, profitable operation.**

You'll find your best answer to this serious fire problem which is currently confronting industry by installing an expandible, fully approved C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing System. Simple piping, running from one centrally located storage tank, instantly transports clean, non-damaging, non-conducting carbon dioxide anywhere in the plant area. Fire at any protected location is extinguished in seconds with an absolute minimum of expense and interruption.

Changes in your fire protection requirements are easily and economically provided for with a C-O-TWO Low Pres-

sure Carbon Dioxide Type Fire Extinguishing System by initially installing an oversized storage tank and adding where necessary the supplementary discharge facilities at a later date.

Flexibility is the keynote . . . the low pressure carbon dioxide storage tanks range in capacity from one to fifty tons . . . discharge facilities can be either manual mechanical, manual electric, automatic mechanical, automatic electric or a combination of these . . . especially installed to fit your particular needs.

### WHEN BUSINESS STOPS . . . INCOME STOPS!

Don't take chances with your investment. Secure the benefits of highly efficient fire protection engineering today...our extensive experience over the years is at your disposal without obligation. Get the facts now!



MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers  
Dry Chemical Type Fire Extinguishers  
Built-In High Pressure and Low Pressure Carbon Dioxide  
Type Fire Extinguishing Systems  
Built-In Smoke and Heat Fire Detecting Systems

**C-O-TWO FIRE EQUIPMENT COMPANY**  
NEWARK 1 • NEW JERSEY

C-O-TWO FIRE EQUIPMENT OF CANADA, LTD. • TORONTO 8 • ONTARIO

Sales and Service in the Principal Cities of United States and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY



## Weldwood Paneling Creates An Atmosphere That Sells

Fine products, like fine pictures, appear at their best against a background of beauty and dignity.

Weldwood paneling presents just such a background because no other type of wall covering material can match the natural beauty and self-evident quality of *real wood*!

This sense of quality naturally reflects itself on the product being displayed, which in turn helps make sales! That is why more and more manufacturers' showrooms and retail establishments are being revitalized saleswise with Weldwood paneled interiors.

**COSTS LESS THAN YOU THINK!** Modern Weldwood production methods make it possible for you to enjoy the beauty of real wood paneling at a lower initial cost than ever before.

**EASY TO INSTALL.** Standard size 4' x 8' panels are easily installed over furring. Weldwood Prefinished Plankweld® Panels (16 $\frac{1}{4}$ " wide x 8' high) are edged grooved and can be installed directly over present wall by a method which completely eliminates face nailing.

**CHOICE OF WOOD FACES.** Birch, African mahogany, Philippine mahogany, white oak, sliced walnut, knotty pine, elm and Korina® are some of the many Weldwood panels immediately available. Any wood face may be had on order.

**LIFETIME GUARANTEE.** Weldwood hardwoods are unconditionally guaranteed for the life of the building.

Further information is available at United States Plywood or U.S.-Mengel Plywood distributing units located in 60 principal cities, or mail coupon.



**Weldwood®**  
HARDWOOD PANELING  
A product of  
**UNITED STATES  
PLYWOOD CORPORATION**

United States Plywood Corporation  
Weldwood Building, 55 West 44th Street  
New York 36, N. Y.  
BW-1-30-54

Please send me free literature on Weldwood Hardwood Paneling.

Name.....

Address.....

City..... State.....

## COMMODITIES BRIEFS

Nickel supplies, still very short (BW-Nov. 14'53,p64), will get a boost in about a year. The Office of Defense Mobilization has set aside \$43-million to expand the government-owned Nicaro nickel plant in Cuba. Production at Nicaro is now about 28-million lb. a year; the new project will increase capacity by 75%.

Mineral production in the U.S. set a new record of \$14.3-billion in 1953, according to the Bureau of Mines. Oil and gas rose the highest above 1952 levels. In metals the trends were mixed: Iron ore and most of the ferro-alloys were up sharply from 1952, but lead was down, and zinc production was the lowest since 1938.

Texas farmers have a new cash crop. This year they harvested 400,000 lb. of sesame from some 1,600 acres; next year's acreage is expected to go up to 100,000. The crop, new to this country, is being grown from an improved strain developed by the Texas Research Foundation. Sesame oil can be used for much the same things as cottonseed oil, but it lasts much longer before turning rancid.

The green coffee market became nervous last week, after moving straight up for close to a month (BW-Jan. 16'54, p72), and began shifting direction from one day to the next. In the meantime, wholesale prices for roasted coffee have had another round of increases, as roasters adjust to the higher price level. A number of brands are now \$1 a lb. or over, at wholesale.

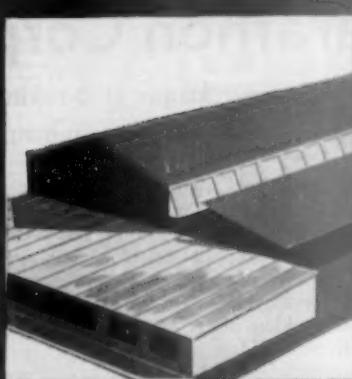
Lead and zinc prices dropped  $\frac{1}{4}$  a lb. last week, the first change for either since last September. Zinc producers are still refining more of the metal than they are selling; unsold stocks increased by another 15,000 tons in December.

Lower price tags on several grades of polyester resins were announced by Celanese Corp. of America last week. The company said the cuts, ranging from 2¢ to 3 $\frac{1}{4}$  a lb. depending on grade, were made possible by more efficient production methods and lower raw material prices.

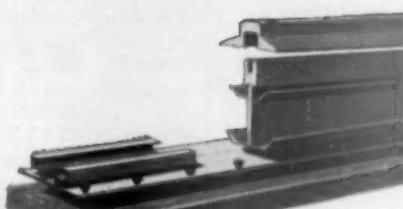
The Texas crude allowable for February will be 2,830,448 bbl. per day, says the Railroad Commission. In announcing the 6,025-bbl.-per-day cut, the commission said that crude stocks were working down fairly well, but that gasoline stocks were still "very, very high."

*how integrated teamwork*

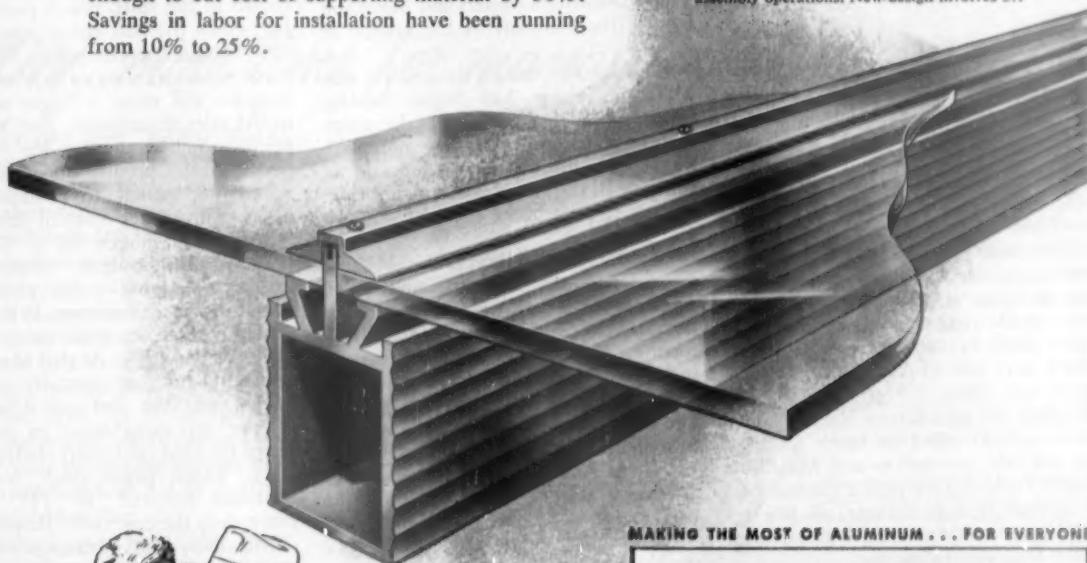
**IMPROVED APPEARANCE  
REDUCED SKYLIGHT  
INSTALLATION COSTS 47%**



- To increase the efficiency of this skylight bar, a leading manufacturer re-designed his product to take advantage of the multiple function characteristics of Harvey aluminum extrusions. Working with Harvey's integrated team of research specialists, metallurgists and engineers, the original glaze-bar design was changed, combining the original 3 components of the basic unit into a single extrusion. As a result, appearance was greatly improved. Weight was reduced enough to cut cost of supporting material by 50%. Savings in labor for installation have been running from 10% to 25%.



Original metal-on-wood  
glaze-bar involved 157 hand  
assembly operations. New-design involves 37.



The men at Harvey are dedicated to the idea of improving your product while reducing your fabricating costs. And, remember, we prepay the freight to your loading dock.

An independent facility producing special extrusions, pressure forgings, bar stock, forging stock, tubing, impact extrusions, aluminum screw machine products, and related mill products.

MAKING THE MOST OF ALUMINUM . . . FOR EVERYONE

**HARVEY**  
**Aluminum**

HARVEY ALUMINUM SALES, INC.  
TORRANCE-LOS ANGELES, CALIFORNIA  
BRANCH OFFICES IN PRINCIPAL CITIES

# COMPANIES

## Marathon Corp.: New Line, New Market

**Food packager is banking on an expanded line of household paper goods, revamped sales structure.**

A 6% hike in sales with no perceptible climb in sales costs is more than most companies ask of 1954—or any other year. But that's the mouth-watering prospect that Marathon Corp., big Wisconsin packaging goods maker, set before stockholders at its meeting this month. It makes Marathon a company to watch.

President John Stevens, Jr., is counting on two things to make his prediction prove out:

- New products. Marathon, up to now, has specialized in food packaging and other producers' lines. In 1954, it will make an all-out play for the consumer market with a household goods line that has been greatly expanded by absorbing Northern Paper Mills (Green Bay, Wis.).

- New sales tactics. The company is revamping its entire selling corps with the accent on specialization.

- Sales Theory—For a company already neck-deep in industrial packaging to plunge suddenly into the consumer field may look to some like a rather chancy move.

But Marathon, which until 1953 had only Waxtex wax paper to offer retailers, has a theory: The way to sell a product is to build up a line of related products; the fastest way to boost wax paper is to team it with paper towels, facial tissues, napkins, and toilet paper—the products it acquired from Northern Paper Mills.

That may sound a bit like buying a coat to match the hat but Marathon can back up its thinking with some firm mathematics. Marathon's wax-paper products (such as sandwich bags), which were sold to retail grocers, added up to only about 8% of its total sales. To really get anywhere in the consumer products field called for heavy advertising and sales promotion—and Marathon couldn't afford it for such a limited line. It figured that promoting all five related lines would cost far less per sales dollar than promoting one.

- Merger—Back in 1952, Stevens and chairman D. C. Everest decided that the odds were against building up a consumer line from scratch. The Marathon name doesn't mean much to the housewife—even though much of the butter, cheese, frozen foods, and other groceries she buys comes in Marathon packaging. They started scanning the field for a going venture with a com-

plementary line; Stevens' eyes fastened on his friend William Buchanan, director and major stockholder of Northern.

By a coincidence, Marathon met Northern coming down the road. Northern, lacking only wax paper to round out its stable, already had a proposal on its lips to take on and market Waxtex.

The Buchanan group was interested in diversifying its holdings. To clinch the deal, Marathon made things more than palatable for Northern stockholders. Early in 1953 Marathon common was selling on the New York Stock Exchange at \$23 to \$25; Northern Paper shares, which are unlisted, were \$71½ bid for the common, \$112 for the preferred. In 1952, Marathon had a net of \$2.28 per share, Northern \$10.74 on its common. Marathon offered to give six shares of its common for each share of Northern common, and five shares of Marathon common for each share of Northern preferred. The ratio looked good to Northern owners and Marathon bought the company in the middle of 1953.

- Sales Shuffle—Before the ink was dry, Marathon chiefs had begun pooling ideas on how they could put sales steam behind the company's new potentialities. They decided on a wholesale revamping of the entire sales organization, gearing it for a more efficient, intensified push.

Marathon's sales corps at that time was split up into six geographic regions. At the head of each was a regional sales manager; all salesmen in the territory reported to him. The regional manager in turn checked in at sales headquarters in Menasha, Wis., headed by Leo F. Croy, executive vice-president in charge of marketing.

When Marathon reappraised this general, broad-line system it found four basic flaws:

- It didn't produce specialized sales people who really understood customers' technical and operating problems and needs.

- It didn't provide a direct line of action for sales decisions.

- It didn't permit effective supervision, close relations between salesmen and supervisors, or close, frequent contact with customers.

- It didn't put marketing people in the best position to seek out and de-

velop new markets for packaging products.

The answer was obvious: Marathon went over to a system keyed to specialization. Today it has eight separate sales departments operating nationwide. Each is headed by a sales manager responsible to Croy. Where necessary, each department has its own regional sales managers, to whom territory salesmen report. Every salesman and regional sales manager is a specialist in his field: The sales group handling packaging sales to dairies doesn't try to tackle frozen food processors, and the frozen food sales staff keeps hands off consumer products.

The Northern sales organization is set up as one of the eight departments. Under Milan Boex, former Northern president and now a vice-president of Marathon, it will handle all household paper items—including Waxtex. In turn, Northern's industrial towels and napkins fall in the bailiwick of Marathon's stock products department.

How does Marathon reconcile its elaborate sales structure with its pledge to hold down marketing and administrative costs? One-shot expenses involved in the shift, which pushed earnings down the past couple of years, are now behind the company. True, with its increased number of supervisors, the program will mean a bigger salary tab in the sales department. But Marathon figures other economies—less travel expense, greater production per salesman, advertising geared to a department's needs—will reduce over-all sales costs.

- Always a Plunger—All in all, Marathon is feeling cheerful about '54. It knows it's taking a big plunge, but Marathon is a company that has repeatedly stuck its neck out—with tidy profits—since 1909. At that time, it was a manufacturer of specialty papers at Rothschild, Wis. But soon it had nosed its way into manufacture of paper and board for food containers—butter carton stock, waxed paper stock, ice cream container material. By 1927, it was fabricating the containers themselves.

Marathon kept spreading—into packaging for the bakery industry, meat products, vegetable oils, and into industrial and institutional towels and napkins. After World War II, it found itself riding the frozen food tide as a big supplier of paper used for packaging frozen vegetables, fish, and meats.

- Bigger and Bigger—To keep up with all these developments, Marathon sprouted physically. It built plants in Ashland, Wausau, and Menasha, Wis.,



## *NOW...more time for management to manage*

EVERY DAY the "paper work" mounts. All of us are snowed under with new regulations, new taxes, new reports of every kind. Never before in the history of American business has the handling of detail been so important—and taken so much of management's time.

But there's a way to cut through this maze and to find more time for the really productive work. It's a simplified plan by Shaw-Walker—"time-engineered" to organize every one of your papers for instant finding, no matter how big or involved your record keeping.

Finding is up to four times faster. Operating costs for help are reduced. But most important, there's less to hamper and delay decisions; man-

agement has more time to manage.

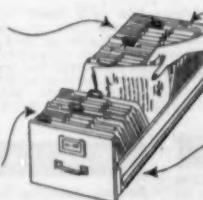
This is just one of the ways we can help you speed your office work. Since starting to work with American business in 1899, Shaw-Walker research has developed close to 4000 products to help increase per-capita productivity—chairs, desks, Fire-Files, filing cabinets, loose-leaf and

payroll equipment—everything for the office except machines, and each "time-engineered" for the needs of every job and worker.

So if you are setting up a new office, or merely wish to modernize, make sure you use Shaw-Walker. It will help you stretch time—the most critical factor in business today.

Finding is fast because papers are automatically classified as to importance...top-ranking customers, active correspondents and infrequent correspondents.

Mistake-proof guide headings eliminate figuring and guessing.



Positive control over all papers out-of-file, and simple automatic follow-up of letters in file.

This is only one of Shaw-Walker's eight "time-engineered" finding systems for records of any kind, whether in one drawer or 1,000.

*Write for FREE  
BOOKLET*

The booklet, "Time and Office Work," is packed with ideas for stretching office time. A wealth of information on "time-engineered" office systems and equipment. 36 pages! Many co-or illustrations! Write today, on business letterhead to: Shaw-Walker, Muskegon 99, Michigan.

"Built Like a Skyscraper"



# SHAW-WALKER

Largest Exclusive Makers of Office Furniture  
and Filing Equipment in the World

Executive Offices at Muskegon, Michigan  
Branches and Dealers in All Principal Cities

# clues: TO THE SOLUTION OF MANAGEMENT MEN'S PROBLEMS.

Published every week—closes 12 days in advance. Rate—\$5.85 per line (\$2.98 per line for positions wanted ads), minimum 2 lines. Allow 5 average words as line; count 2 words for box number. Write for special rates for Business Services advertisements. Address box number replies c/o BUSINESS WEEK to the office nearest you. NEW YORK, 330 W. 42nd St., CHICAGO, 520 N. Michigan Ave., SAN FRANCISCO, 68 Post St.

## EMPLOYMENT

### Position Vacant

**Sales Executive—Assistant to President.** Must have thorough background in conveyor industry. Age preferred 40-50. Midwest. Please reply Box F-1407, Business Week.

### Selling Opportunities Offered

**Opportunity for Aggressive Distributors now contacting industrial accounts.** Leading manufacturer of Rust Preventative Coatings has exclusive territories available. Our representative will assist your organization in selling our line of Rust Preventative and Chemical Resisting Coatings. Write now for full details regarding this profitable franchise. Rust-Sels Company, 9508 H Meach Ave., Cleveland 6, Ohio.

**Manufacturer's Representatives or Distributors** wanted by western producer of fluorocarbon products with wide range of aircraft, hydraulic and electronic applications. Detroit, New York, Philadelphia, Baltimore, Rochester, Schenectady, Buffalo, Houston, Denver, New Orleans, Florida. Write full information. RW-1538, Business Week.

### Positions Wanted

**Treasurer-Controller experienced in banking,** investments, manufacturing, public accounting; past 7 yrs. multi-plant industrial treasurer-controlling insurance manager (licensed). Top qualifications: accounting, finance, statistics. Expert controllership techniques: flexible budgeting, standard costs, operations research, graphic controls-reports. Moderate. Relocate. PW-1529, Business Week.

**Executive Accountant, 42, M.B.A., C.P.A. (N.Y. & N.J.)** qualified to act as controller, treasurer, staff assistant; 20 yrs. a private, public, government accountant—all phases of business; university lecturer 3 yrs. Present earnings over \$5,000. PW-1536, Business Week.

### Selling Opportunities Wanted

**Chicago Sales Agent to Electric, Hardware and Catalog Jobbers** can do a job on one more line. RA-1457, Business Week.

**Sales Representative Wash., D. C., Young Aggressive** desires distributorship or represent lines sold and typ. business for U. S. Govt. in Va., Md., and N. C. Financially responsible, 8 yrs. selling experience Nat'l. concern. RA-1552, Business Week.

**We are a result producing sales engineering agency covering New England for manufacturers of quality machinery and equipment.** Are you in need of such representation? We seek an additional line of real merit. RA-1480, Business Week.

**Two men, 35, now contacting all types industries** fast growing Greater Delaware Valley area, desire set up Mfrg's Agency here. Use our contacts and "push" to keep your sales up. RA-1485, Business Week.

**Manufacturers Representative covering New York, New Jersey, Connecticut and Eastern Pennsylvania** seeks additional line either Industrial or Commercial. RA-1475, Business Week.

**Manufacturers: Aggressive young firm offers** entire facilities as NYC headquarters for your export and domestic sales development. RA-1514, Business Week.

## SPECIAL SERVICES

**Complete Tooling programs performed on a firm price guaranteed basis.** Excellent tool design staff plus 80 skilled tool and die makers at your service. Fast delivery. Large work a specialty. Mechanics Incorporated, Municipal Airport, Bridgeport, Connecticut.

## A GOOD HABIT

is any habit which can benefit you. By watching for the "clues" section you will find employment opportunities—wanted.

Write for further information to: Clues Section, BUSINESS WEEK  
330 West 42nd St., New York 36, N. Y.

**Georgia manufacturer, specializing in sheet metal fabrication and synthetic baked-on enamel finishing, desires connection on contract basis.** Large reservoir of skilled and semi-skilled workmen adept at assembly operations including welded assembly. SS-1510, Business Week.

**Need a market survey abroad?** Thorough down-to-earth studies made in any country. Representatives all over the world. For details, write Overseas Business Services, McGraw-Hill International Corporation, 330 West 42nd St., New York 36, New York.

**Small advertisers can have the advantage of** top creative talent. Successful copy-art team experienced with million dollar accounts now available in NYC area for free lance. Write SS-9785, Business Week.

**300 TV showings for \$2,750—if your promotion** film is suitable. Measured audiences over 4,500,000. Write: Public Service Network, Princeton, N. J.

### Registered Patent Attorney

**Patent Information Book, without obligation.** Pat. Atty. & Advisor Navy Dept. 1930-47, Assoc. Examiner Pat. Off. 1922-29 Gustav Miller, Patent Lawyer, 14BW5, Warner Blvd., Wash. 4, D.C.

### Rebuilding

**We Rebuild Your Machine Tools to New Tolerances.** Fifty 1st. class Machinists, with an average rebuilding experience of fifteen years. All work done by highly skilled, AAA-E. Now doing work for America's leading Industries. Write for details or phone 2-7721. Joseph Behr & Sons, Inc., Rockford, Illinois.

## BUSINESS OPPORTUNITIES

**Test-operate in California without investment** in plant or equipment. New Survey of manufacturing, assembly, packaging and warehouse facilities available in Alameda Co. on lease or contract gives valuable facts. Write today asking specific questions to: Alameda Co. New Industries Com., Suite #1, 427 13th St., Oakland, Calif.

**Why Make Money on Parts to Pay for Your Losses in Tooling Them Up?** Our firm price, guaranteed big for processing to your equipment, too design, tool built, tool tryout, and building of prototypes can assure your profit. Top management executives are invited to write for a copy of "The Mechanics Plan". Mechanics Incorporated, Bridgeport, Connecticut, Operating Nationally.

## INVESTMENT GUIDANCE

**The only book of its kind; Investment companies** (384 pp.) by noted authority. Presents modern ideas and techniques prised by astute investors everywhere. Shows you how to invest successfully for capital gains, income, safety. 52,000 copies sold to date. Introductory price \$15 (reg. \$20). Money back guarantee. Arthur Wiesenberger & Co., 41 Trinity Place, New York 6, New York.

## INDUSTRIAL SITE

**Factory building in South:** Will build air-conditioned, one story steel and masonry plant at \$4.25 per square foot. Lease or time purchase plan. Some buildings now available. Charleston Development Board, Charleston, S. C.

vacant, selling—business opportunities of all types, special services and offerings and equipment offered and wanted.

and at Menominee, Mich. It bought a mill and another building for converting at Oswego, N. Y., set up a plant at Sunnyside, Wash., to turn out frozen food cartons for West Coast customers.

To supply wood pulp to its growing family of mills, near the end of World War II it got going on a huge logging and pulping project on the north shore of Lake Superior. It laid out \$20-million for a setup complete with a mill capable of turning out 350 tons of pulp daily, logging operations over 5,000 mi. of Canadian timberland, and a full-scale company town—Marathon, Ont.

• **No Lid**—But for all its proliferation, Marathon still lacked a full line of consumer goods in its natural field. It feels the Marathon-Northern combination—which raises consumer items to 25% of sales—opens the way for a sprint from net sales of \$112.2-million in fiscal '53 to a figure pretty close to the \$120-million mark. And it's not putting the lid on even there. With its new sales setup, it will soon be wagging inquiring tentacles in such promising packaging fields as dehydrated milk, self-service in meat retailing, cooked and prepared foods, textiles, and hardware.

## COMPANIES BRIEFS

**Earthmovers:** The Osgood Co. of Marion, Ohio, bought General Excavator Co., also of Marion and also a maker of cranes and earthmoving machinery.

... Blaw-Knox Co. of Pittsburgh bought All Purpose Spreader Co. of Elyria, Ohio, and will operate it as a division.

... International Harvester Co. bought Heil Co. patents for a line of two-wheel industrial tractors.

Arthur G. McKee & Co., Cleveland specialist in blast furnaces, open hearth furnaces, and petroleum refineries, set up a new engineering division to serve growth industries such as chemicals, aluminum, atomic energy.

**Piggyback freight:** Van-Car Corp. of Chicago got ODM authority to write off 70% in five years on a \$42-million investment in freight cars designed to carry truck trailers (BW-Sep. 12 '53, p110). Van-Car now has fast write-off allowances on a total of \$70-million, for 5,000 cars. It is a subsidiary of Rail-Trailer Co.

Columbia Records, Inc., plans to build a new phonograph record factory in Terre Haute, Ind., to augment its facilities in Bridgeport, Conn., and Hollywood, Calif. All plants will be equipped with injection molding presses (page 62); most records up to now have been molded by compression.

## ADVERTISERS IN THIS ISSUE

Business Week—January 30, 1954

ACME ALUMINUM ALLOYS, INC.	112	FIRESTONE PLASTICS CO.	93	NATIONAL STEEL CORP.	76-77
Agency—Don Kemper Co., Inc.		Agency—Grey Adv. Agency, Inc.		Agency—Campbell-Ewald Co.	
ADAMS & WESTLAKE CO.	114	FORT WAYNE CORRUGATED PAPER CO.	104	THE NEW BRITAIN MACHINE CO.	34
Agency—Henri, Hurst & McDonald, Inc.		Agency—Doremus & Co.		Agency—Wilson, Haight, Welch & Grover, Inc.	
AIR EXPRESS DIV. OF RAILWAY EXPRESS AGENCY, INC.	24	GAMEWELL CO.	86	NEW ENGLAND MUTUAL LIFE INSURANCE CO.	125
Agency—Robert W. Orr & Assoc., Inc.		Agency—Sutherland-Abbott		Agency—N. W. Ayer & Son, Inc.	
ALEMITE DIV. OF STEWART WARNER	69	GENERAL ELECTRIC CO. (AIR CONDITIONING DEPT.)	139	NEW YORK CENTRAL SYSTEM	91
Agency—MacFarland, Averyard & Co.		Agency—Kenyon & Eckhardt, Inc.		Agency—Poote, Cone & Belding	
ALLISON DIV., GENERAL MOTORS CORP.	6-7	GENERAL ELECTRIC CO.	39-46	N. Y. STATE DEPT. OF COMMERCE	127
Agency—Kudner Agency, Inc.		Agency—G. M. Basford Co.		Agency—Hatten, Barton, Durstine & Osborn, Inc.	
ALL-YEAR CLUB OF SOUTHERN CALIFORNIA	119	GENERAL FIREPROOFING CO.	19	NORTH AMERICAN AVIATION, INC.	89
Agency—Poote, Cone & Belding		Agency—The Griswold-Eshleman Co.		Agency—Hatten, Barton, Durstine & Osborn, Inc.	
ALUMINUM CO. OF AMERICA (CHEMICAL DIV.)	137	THE GLOBE-WERNICKE CO.	74	NORTH AMERICAN PHILIPS CO.	20
Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Kammann-Mahan, Inc.		Agency—Erwin, Wasley & Co., Inc.	
AMERICAN AUTOMATIC TYPEWRITER CO.	63	GOODYEAR TIRE & RUBBER CO., INC. (CHEMICAL DIV.)	75	THE OSBORN MFG. CO.	48
Agency—Frank C. Nahser, Inc.		Agency—Kudner Agency, Inc.		Agency—The Griswold-Eshleman Co.	
AMERICAN BLOWER CORP.	134	GRAYBAR ELECTRIC CO.	73	PATERSON PARCHMENT PAPER CO.	56
Agency—Brooke, Smith, French & Dorrance, Inc.		Agency—G. M. Basford Co.		Agency—Platt, Zachary & Button, Inc.	
AMERICAN TELEPHONE & TELEGRAPH CO.	2	GREEN FUEL ECONOMIZER CO., INC.	68	PITNEY-BOWES, INC.	88
Agency—N. W. Ayer & Son, Inc.		Agency—Banger-Funnell, Inc.		Agency—L. E. McIlvane & Co., Inc.	
ARABOL MFG. CO.	117	HAMILTON MFG. CORP.	102	PITTSBURGH CORNING CORP.	103
Agency—R. T. O'Connell Co.		Agency—Ruthrauff & Ryan, Inc.		Agency—Ketchum, MacLeod & Grove, Inc.	
ATLAS PLYWOOD CORP.	109	HAMMERMILL PAPER CO.	129	PITTSBURGH STEEL CO.	64-65
Agency—James Thomas Chirurg Co., Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—Bond & Starr, Inc.	
BAKELITE CO., DIV. OF UNION CARBIDE & CARBON CORP.	107	HARVEY ALUMINUM (DIV. OF HARVEY MACHINING CO., INC.)	147	THE PURE OIL CO.	15
Agency—J. M. Mathes, Inc.		Agency—Hixon & Jorgensen, Inc.		Agency—Leo Burnett Co., Inc.	
BALTIMORE & OHIO RAILROAD	93	HERCULES POWDER CO.	16	THE RAULAND-BORG CORP.	128
Agency—The Richard A. Foley Adv. Agency, Inc.		Agency—Fuller & Smith & Ross, Inc.		Agency—George Brodsky	
BANKERS TRUST CO.	1	THE HYDRAULIC PRESS MFG. CO.	78	REEVES PULLEY CO.	62
Agency—Cowan & Dengler, Inc.		Agency—The Jay H. Marsh Co.		Agency—Caldwell, Larkin & Co., Inc.	
THE BARRY CORP.	141	JENKINS BROS.	36	ROCHESTER PRODUCTS, DIV. OF GENERAL MOTORS	88
Agency—Engineered Advertising		Agency—Horton-Noyes Co.		Agency—Hanford & Greenfield, Inc.	
BETHLEHEM STEEL CO.	57	JOHNS-MANVILLE CORP.	11	ROCKWOOD SPRINKLER CO.	111
Agency—Jones & Brakeley, Inc.		Agency—J. Walter Thompson Co.		Agency—James Thomas Chirurg Co., Inc.	
BOWER ROLLER BEARING CO.	2nd Cover	JOHNSON & HIGGINS.	92	ROYAL TYPEWRITER CO., INC.	35
Agency—MacManus, Jones & Adams, Inc.		Agency—Doremus & Co.		Agency—Young & Rubicam, Inc.	
THE E. W. BUSCHMAN CO.	78	JONES & LAUGHLIN STEEL CORP.	71	JOSEPH T. RYERSON & SON, INC.	33
Agency—Penn & Hamaker, Inc.		Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Calkins & Holden, Carlock, McClinton & Smith, Inc.	
CAMPBELL, WYATT & CANNON FOUNDRY CO.	85	JOY MFG. CO.	55	SANTA FE TANK & TOWER CO.	72
Agency—Walde & Briggs, Inc.		Agency—Walker & Downing, General Agency		Agency—Tilda & Cants Adv. Agency	
CARRIER CORP.	101	KEOKUK ELECTRO-METALS CO.	131	SCOTT PAPER CO.	87
Agency—N. W. Ayer & Son, Inc.		Agency—Walde & Briggs, Inc.		Agency—J. Walter Thompson Co.	
CHICAGO & EASTERN ILLINOIS R. R.	14	KOLDFLO DIVISION, MULLING MFG. CORP.	13	SHAW WALKER CO.	149
Agency—Fuller & Smith & Ross, Inc.		Agency—The Griswold-Eshleman Co.		Agency—J. Walter Thompson Co.	
CITY OF LONG BEACH	132	KOPPERS CO., INC., CHEMICAL DIV.	60	SKF INDUSTRIES, INC.	82
Agency—Patch & Curtis Adv. Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—O. B. Tyson & Co., Inc.	
CLUES (CLASSIFIED ADVERTISING)	150	THE LAMB ELECTRIC CO.	10	SOCONY-VACUUM OIL CO., INC.	3rd Cover
CONSOLIDATED ENGINEERING CORP.	61	Agency—The Bayless-Kerr Co.		Agency—Compton Adv., Inc.	
Agency—Hixon & Jorgensen, Inc.		LAMSON MOBILIFT	8	A. E. STALEY MFG. CO.	59
C-O-TWO FIRE EQUIPMENT CO.	146	Agency—Don Allen & Associates		Agency—Ruthrauff & Ryan, Inc.	
Agency—G. M. Basford Co.		LINDBERG ENGINEERING	144	STATE OF LOUISIANA	123
S. H. COUCH CO., INC.	94	Agency—Saunders, Shrout & Assoc., Inc.		Agency—Whitlock-Swigart, Inc.	
Agency—Charles H. Davis		MAGNAFLUX CORP.	124	STEVENS POINT INDUSTRIAL DEVELOPMENT COMMITTEE	110
CROWN CORK & SEAL CO., INC. CROWN CAN DIV.	49	Agency—Olean, Jordan, Shostel, Inc.		Agency—W. H. Long Co., Inc.	
Agency—The Clements Co.		MALLINCKRODT CHEMICAL WORKS	4-5	SYLVANIA ELECTRIC PRODUCTS, INC.	113
DANLY MACHINE SPECIALTIES, INC.	9	Agency—The Philip Ritter Co.		Agency—Ceil & Preahay, Inc.	
Agency—Walde & Briggs, Inc.		P. R. MALLORY & CO., INC.	135	TIMKEN ROLLER BEARING CO.	4th Cover
DETROIT STEEL PRODUCTS CO.	82	Agency—The Altkin-Kynett Co.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
Agency—Fuller & Smith & Ross, Inc.		MARINE MIDLAND TRUST CO. OF NEW YORK	3	THE TORRINGTON CO.	116
F. W. DODGE CORP.	92	Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—Hazard Adv. Co.	
Agency—Albert Frank-Guenther Law, Inc.		MCGRAW-HILL PUBLISHING CO.	140-141	TOWNSEND CO.	92-93
E. I. du PONT de NEMOURS & CO.	23	MECHANICAL HANDLING SYSTEMS, INC.	196	Agency—Bond & Starr, Inc.	
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—The Fred M. Randall Co.		U. S. PLYWOOD CORP.	146
DUREZ PLASTICS & CHEMICALS, INC.	72	MEILING STEEL SAFE CO.	120	Agency—Kenyon & Eckhardt, Inc.	
Agency—Comstock & Co.		Agency—Blaco Adv. Agency		VARD, INC.	89
EASTMAN KODAK CO.	122	MINNEAPOLIS-HONEYWELL REGULATOR CO.	95-97	Agency—The McCarty Co.	
Agency—J. Walter Thompson Co.		Agency—Poote, Cone & Belding		WALLACE TUBE CO.	121
EBASCO SERVICES, INC.	143	MINNEAPOLIS & ST. LOUIS RAILWAY	80	WARREN REFINING & CHEMICAL CO.	94
Agency—Albert Frank-Guenther Law, Inc.		Agency—Grubb-Cleland Co.		Agency—John Yezbak & Co.	
EMPLOYERS MUTUAL LIABILITY INS. CO. OF WASPS	51	MISSISSIPPI GLASS CO.	96	WESTERN MARYLAND RAILWAY CO.	78
Agency—J. Walter Thompson Co.		Agency—Ralph Smith Adv. Agency		Agency—Marchalk & Pratt Co.	
THE FARVAL CORP.	142	NATIONAL ELECTRIC PRODUCTS CORP.	81	WORTHINGTON CORP.	107
Agency—The Griswold-Eshleman Co.		Agency—Ketchum, MacLeod & Grove, Inc.		Agency—James Thomas Chirurg Co., Inc.	

## This Much Hope

Last week in this space we suggested that it would be a grave error to attach the wrong hope to the international negotiations on atomic energy that now seem to be getting started in Berlin.

The wrong hope: that an agreement might emerge eliminating, or promising eventually to eliminate, the deadly possibility of full-scale atomic warfare.

No such agreement, we argued last week, is possible or even conceivable. To judge the outcome of the negotiations by such a standard is to foredoom them. There is no way the world can escape the hard fact that any major war in the future will be an atomic war.

And that suggests the real subject matter of the negotiations, the real standard against which they should be judged: Granted that atomic weapons make war more deadly—do they also make it more likely?

That is a real and important question, and one about which something can perhaps be done.

Unquestionably, the new weapons have some pacifying effect. During the period—now nearing its end—of overwhelming U.S. superiority in atomic armament, the effect was very great; it rates a lot of the credit for the world's remarkable achievement of tiptoeing through nearly a decade of cold war without an explosion.

There is that much to the good. Against it, there is this much to the bad:

A stockpile of nuclear bombs is—beyond anything ever known before—a blitzkrieg weapon. For the first time in history, it looks possible to inflict decisive damage on a whole nation in one shattering blow. This puts a terrible premium on striking first. Retaliation may be certain; but your first strike would logically be calculated to come near paralyzing your enemy.

Consider the dilemma: atomic war if you act; defeat if you wait and let the enemy (who faces the same dilemma) act first.

So, to the insoluble problem—the unbearable destructiveness of atomic war—you have to add another: the way that very destructiveness makes war—the Pearl Harbor-type attack—more likely.

That second problem, we submit, is soluble. It is one to which statecraft can and should address itself. And it is the measure against which the outcome of the present U.S.-Soviet negotiations should be appraised.

### The First Step

It is possible at least to imagine an ultimate solution: Complete or even substantial atomic disarmament would eliminate the blitzkrieg aspect of atomic weapons.

That's still only a hope for the future. But it is also possible, we think, to define the first step. That is to reduce the emotional tensions involved—to make the existence of atomic weapons a thing that can be talked about rationally, rather than a dirty word.

That, to our mind, is the great significance of President Eisenhower's atomic proposals at the United Nations last month. They add up to negotiation; and, in the present state of the world, serious negotiation, in itself, is a good thing. The real importance of the President's specific stockpile proposal is as a demonstration that he has in mind meaningful discussion with real content, instead of the formal fencing matches that the U.N. debates on atomic energy have become. The proposals are important, too, as a sign that the U.S. is abandoning the obsolete Acheson-Baruch plan—which has become, with the end of the world situation in which it made sense, a block to progress.

The intrinsic values of Eisenhower's proposed international atomic power program are not to be ignored, of course: as a gesture of goodwill in a world that has no surplus of good feeling; as one more step to level out the dangerous disparities among the rich parts of the world and the poor parts.

Nevertheless, we welcome the proposal even more as evidence of a desire for meaningful discussions rather than more jockeying for propaganda advantage.

For the coming negotiations are either more than propaganda or they are a terrible mistake. In terms of a mere contest for world approval, the U.S. enters the atomic conferences in a weak position—once the worldwide wave of pleasure that greeted the President's U.N. speech has spent itself.

At the verbal level, the Russians are advancing the appealing ideas of atomic disarmament and outlawry of atomic weapons.

The U.S. government, on the other hand, is engaged in making open and explicit its primary reliance on atomic weapons for its national security. Moreover, this reliance makes such complete good sense that no U.S. negotiator could retreat from it except in a context of general agreement that radically reduced U.S.-Soviet hostility.

A cynic might argue that the U.S. has walked into a propaganda trap, that Eisenhower's advisers expected that the Russians would give them a cheap victory by rejecting the proposed private consultations.

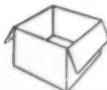
We prefer to believe that the President's speech represented a magnanimous acceptance of an exposed position. He is risking a setback in propaganda terms as part of an effort to solve a real problem.

One hopeful conclusion, then, does emerge from this gloomy and terrifying subject:

Almost any outcome of the atomic negotiations that is not a complete breakdown will be something of a victory. It need not be a cause for despair if a full-fledged international stockpile fails to emerge. As elementary a result as a reasonably amicable decision to keep talking will importantly reduce the world's danger.

# 1,000-FEET PER MINUTE BOARD MILL

Relies on the World's Greatest Lubrication  
Knowledge and Engineering Service



This world's fastest cylinder-type paper board machine is a city block long—designed to produce 1,000 feet of .009-inch boxboard paper, 11 feet wide, every minute!

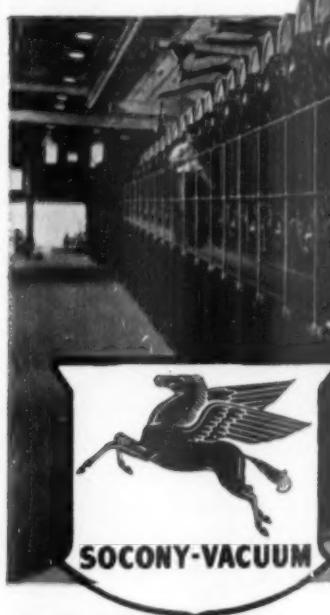
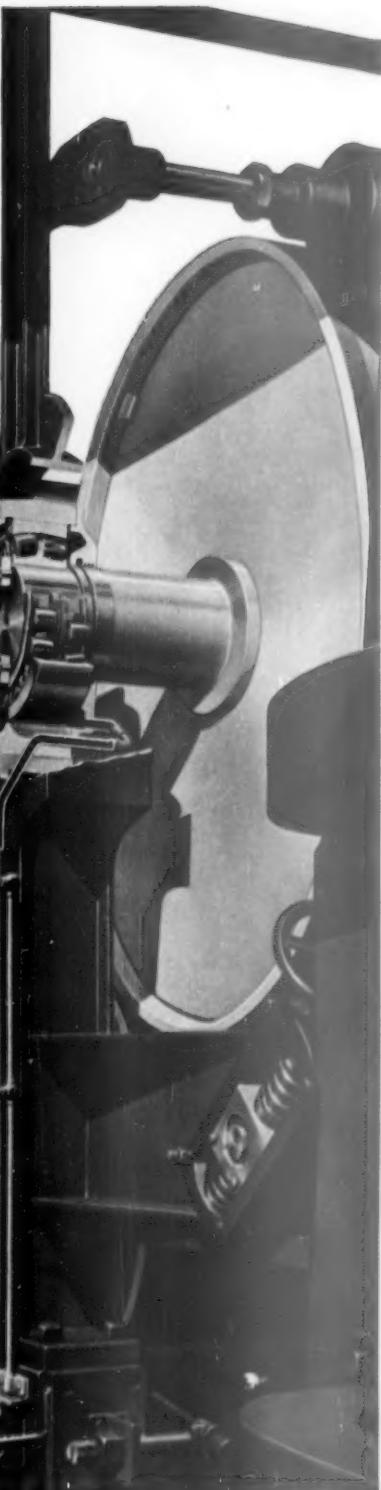
Starting at one end as a pulpy mixture, the paper goes through successive water-removing presses and a series of drier rolls—comes out the other end as finished paper board.

The drier rolls, operating at temperatures up to 375°F., revolve on double-row spherical roller bearings, shown cut open.

To protect these costly bearings—keep them free from deposits—calls for a special high-temperature circulating oil.

Socony-Vacuum supplies this oil as part of a program of Correct Lubrication. You can get a similar, cost-saving program for your mill, mine or factory.

Just call your Socony-Vacuum representative.



OPERATED BY GIBRALTAR CORRUGATED PAPER CO., INC., NORTH BERGEN, N. J.

## SOCONY-VACUUM *Correct Lubrication*

FIRST STEP IN CUTTING COSTS

SOCONY-VACUUM OIL COMPANY, INC., and Affiliates: MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

# Steel that keeps a 105's cost and barrel both in line

DESPITE all you read about atomic cannons and guided missiles, the 105 mm howitzer is still the backbone of the field artillery. It can plunk a shell on an enemy tank from 9000 yards away or stop an advance at point blank range. Friend and foe alike know it for pinpoint accuracy.

One of the reasons for this is the locking ring you see below. It holds the gun's barrel in line. If it didn't do its job the

best gunner in the world couldn't hit the target.

One manufacturer was making locking rings from forgings but found manufacturing costs were too high. Each ring had to be laboriously set up in a lathe and machined. Then it had to be heat treated.

Metallurgists of The Timken Roller Bearing Company were called in, and suggested a way to machine many rings

in rapid succession with a single set up—use tubing. Since the Timken® steel tubing was heat treated at our mill, further heat treating was not necessary. How much will the use of Timken seamless steel tubing save? About \$7.00 on each locking ring is the manufacturer's estimate.

Our files are filled with case histories just like this, where a difficult problem was stamped "Solved—by Timken Alloy Steel." Among the many analyses of Timken fine alloy steel, there may be one that can solve your steel problem, too.

Why not see if we can help you. Write The Timken Roller Bearing Company, Steel and Tube Division, Canton 6, Ohio. Cable address: "TIMROSCO."

